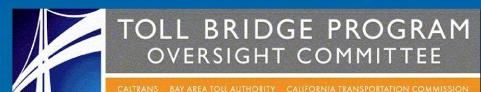


# **Toll Bridge Seismic Retrofit and Regional Measure 1 Programs**

Monthly Progress Report March 2007



Released: April 2007



# **Toll Bridge Seismic Retrofit and Regional Measure 1 Programs**

Monthly Progress Report March 2007

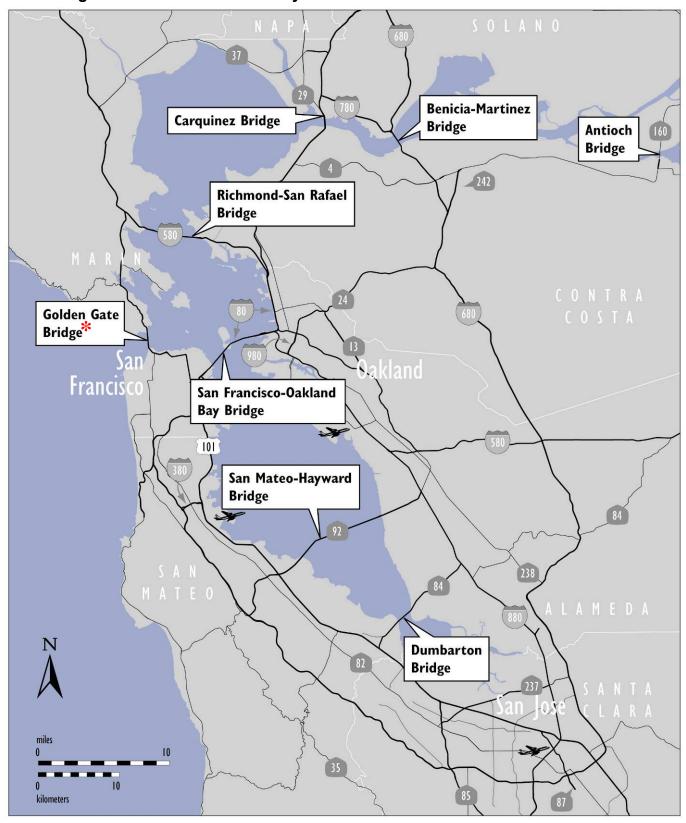




# **TABLE OF CONTENTS**

Introduction	1
Executive Summary	2
Toll Bridge Seismic Retrofit Program—Cost	2
Toll Bridge Seismic Retrofit Program—Schedule	3
Regional Measure 1 Program—Cost	4
Regional Measure 1 Program—Schedule	5
Highlights of Project/Program Activities and TBPOC Actions	6
Project / Contract Reports	7
San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Summary	8
▶ Skyway Contract	10
► Self-Anchored Suspension (SAS) E2/T1 Foundations Contract	
Self-Anchored Suspension (SAS) Superstructure Contract	
Yerba Buena Island (YBI)	
South/South Detour Contract  NPL Townside of Street Acts of Contracts	
<ul> <li>YBI Transition Structure Contracts</li> <li>Oakland Touchdown</li> </ul>	
Oakland Touchdown Submarine Cable Relocation Contract	
Oakland Touchdown #1 Contract	
Oakland Touchdown #2 Contract	
Other Major Contracts	
Other Completed Contracts and Related Work	
San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project	27
Richmond-San Rafael Bridge (RSRB) Seismic Retrofit Project	32
Other Completed Seismic Retrofit Projects	34
Other Toll Bridges	35
Project / Contract Reports	37
New Benicia-Martinez Bridge Project Summary	38
New Benicia-Martinez Bridge Contract	
Other Contracts and Related Project Activities	
New Carquinez Bridge Project	46
Interstate 880/State Route 92 Interchange Reconstruction Project	49
Other Completed Regional Measure 1 (RM1) Projects	51
Appendices	53
Appendix A:San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail	
Appendix B: Toll Bridge Seismic Retrofit Program Cost Detail	
Appendix C: Toll Bridge Seismic Retrofit Program Summary Schedule	
Appendix D: Regional Measure 1 Program Cost Detail	
Appendix E: Regional Measure 1 Program Summary Schedule	
Appendix F: Glossary of Terms	62

# Toll Bridges of the San Francisco Bay Area



<sup>\*</sup> Under the Jurisdiction of the Golden Gate Bridge, Highway and Transportation District

## INTRODUCTION

In July 2005, Assembly Bill 144, Hancock (AB 144) created the Toll Bridge Project Oversight Committee (TBPOC) to implement a project oversight and project control process for the Benicia-Martinez Bridge project and the state toll bridge seismic retrofit program projects. Comprised of the Caltrans Director, the Bay Area Toll Authority (BATA) Executive Director and the Executive Director of the California Transportation Commission (CTC), the TBPOC's project oversight and control processes include but are not limited to reviewing bid specifications and documents, providing field staff to review ongoing costs, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the committee) and preparing project reports.

AB 144 identified the Toll Bridge Seismic Retrofit Program and the new Benicia-Martinez Bridge Project as being under the direct oversight of the TBPOC. The Toll Bridge Seismic Retrofit Program includes:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Construction
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
Eastbound Carquinez Bridge Seismic Retrofit	Complete
Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The new Benicia-Martinez Bridge is part of a larger program of toll-funded projects, called the Regional Measure 1 (RM1) Toll Bridge Program, under the responsibility of the BATA. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans (CT) will continue to report on their progress as an informational item. The RM1 program includes:

RM1 Projects	Open to Traffic Status
New Benicia-Martinez Bridge	Construction
1927 Carquinez Bridge Demolition	Construction
Interstate 880/State Route 92 Interchange Reconstruction	Advertised
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Open
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open

This report focuses on identifying critical project issues and monitoring project cost and schedule performance for the projects as measured against approved budgets and schedule milestones. This report is intended to fulfill Caltrans' requirement to provide monthly project progress reporting to the TBPOC under Section 30952.05 of the Streets and Highway Code.

# **EXECUTIVE SUMMARY**

# Toll Bridge Seismic Retrofit Program—Cost (\$Millions)

Project	Work Status	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast*	At- Completion Variance	Cost Status
a	b	С	d	e = c + d	f	g	h = g - e	i
SFOBB East Span Replacement Project								
Capital Outlay Support		959.4	-	959.4	480.2	977.1	17.7	
Capital Outlay Construction								
Skyway	Construction	1,293.0	-	1,293.0	1,119.6	1,293.0	-	•
SAS E2/T1 Foundations	Construction	313.5	-	313.5	199.3	313.5	-	•
SAS Superstructure	Construction	1,753.7	-	1,753.7	256.2	1,767.4	13.7	•
YBI South/South Detour	Design/Const	131.9	-	131.9	44.1	334.4	202.5	
YBI Transition Structures	Design	299.3	-	299.3	-	276.1	(23.2)	•
Oakland Touchdown (OTD)		283.8	-	283.8	-	302.5	18.7	
* OTD Submarine Cable	Construction	-	-	-	-	9.6	-	•
* OTD No. 1 (Westbound)	Advertised	-	-	-	_	226.5	-	
* OTD No. 2 (Eastbound)	Design	-	-	-	-	62.0	-	•
* OTD Electrical Systems	Design	-	-	-	-	4.4	-	•
Existing Bridge Demolition	Design	239.2	-	239.2	-	222.0	(17.2)	•
Stormwater Treatment Measures	Construction	15.0	-	15.0	8.2	15.0		•
East Span Completed Projects		90.3	-	90.3	89.2	90.3		
Right-of-Way and Environmental Mitigation		72.4	-	72.4	38.8	72.4	-	•
Other Budgeted Capital		35.1	-	35.1	0.6	11.0	(24.1)	
Total SFOBB East Span Replacement Project		5,486.6	-	5,486.6	2,236.2	5,674.7	188.1	
SFOBB West Approach Replacement	Construction							•
Capital Outlay Support		120.0	-	120.0	89.3	120.0	-	
Capital Outlay Construction		309.0	-	309.0	229.4	309.0	-	
Total SFOBB West Approach Replacement		429.0	-	429.0	318.7	429.0	-	
Richmond-San Rafael Bridge Retrofit	Complete							•
Capital Outlay Support		134.0	(7.0)	127.0	125.9	127.0	-	
Capital Outlay Construction & Right-of-Way		780.0	(82.0)	698.0	665.6	698.0	-	
Total Richmond-San Rafael Bridge Retrofit		914.0	(89.0)	825.0	791.5	825.0	-	
Program Completed Projects	Complete							
Capital Outlay Support		219.8	-	219.8	219.4	219.8	-	
Capital Outlay Construction		705.6	-	705.6	698.1	705.6	-	
Total Program Completed Projects		925.4	-	925.4	917.5	925.4	-	
Miscellaneous Program Costs		30.0	-	30.0	24.7	30.0	-	
Program Contingency		900.0	89.0	989.0	-	800.9	(188.1)	
Total Toll Bridge Seismic Retrofit Program		8,685.0	-	8,685.0	4,288.6	8,685.0	-	

Within Approved Current Schedule and Budget

Potential Cost and Schedule Impacts: Possible future need for Program Contingency Allocation

Known Cost and Schedule Impacts: Request for Program Contingency Allocation forthcoming Note: Details may not sum to totals due to rounding effects.

<sup>\*</sup> Forecasts for the Monthly Reports are generally updated on a quarterly basis in conjunction with Risk Analysis assessments for the TBSRP Projects and the TBSRP Quarterly Reports.

<sup>\*</sup>BATA will consider approval of a budget change for the South/South Detour and YBI Transition Structure Contracts in Fiscal Year 2006-2007.

# Toll Bridge Seismic Retrofit Program—Schedule

Project	AB 144 / SB 66 Project Complete Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (02/2007)	Project Complete Schedule Forecast (02/2007)	Schedule Variance (Months)	Schedule Status	Remarks
a	b	C	d= b + c	e (02/2007)	f = e – d	g	h
SFOBB East Span Replacement Proje	ct						
Skyway	Apr 07	8	Dec 07	Dec 07	-	•	See page 10.
SAS E2/T1 Foundations	Jun 08	(3)	Mar 08	Mar 08	-	•	
SAS Superstructure	Mar 12	12	Mar 13	Mar 13	-	•	See Note.
YBI South/South Detour	Jul 07	36	Jun 10	Jun 10	-	•	See discussion on pages 18, 19 and 20.
YBI Transition Structures	Nov 13	12	Nov 14	Nov 14	-	•	See discussion on pages 18, 19 and 20.
Oakland Touchdown (OTD)	Nov 13	12	Nov 14	Nov 14	-	•	
OTD Submarine Cable	n/a		Jan 08	Jan 08	-	•	Contract was awarded on January 11, 2007. See pages 9 and 21.
OTD Westbound	n/a		Jul 09	Oct 09	3		
OTD Eastbound	n/a		Nov 14	Nov 14	-	•	See Note.
Existing Bridge Demolition	Sep 14	12	Sep 15	Sep 15	-	•	See Note.
Stormwater Treatment Measures	Mar 08	-	Mar 08	Jun 07	(9)	•	Forecast based on actual award date and duration in contractor's A+B bid.
Open to Traffic Date: Westbound	Sep 11	12	Sep 12	Sep 12	-	•	See Note.
Open to Traffic Date: Eastbound	Sep 12	12	Sep 13	Sep 13	-	•	See Note.
SFOBB West Approach Replacement	Aug 09	-	Aug 09	Aug 09	-	•	
Richmond-San Rafael Bridge							
Seismic Retrofit	Aug 05	-	Aug 05	Oct 05	2	•	Seismic retrofit completed July 29, 2005. Formal acceptance of contract October 28, 2005. \$89 million has been transferred to Program Contingency. See page
Public Access Project	n/a	-	May 07	May 07	-	•	34.

Note: Schedules for selected projects and the Open to Traffic dates were extended by 12 months from the AB144/SB66 baseline schedule due to Addenda #5 and #7 on the SAS Superstructure contract.

# Regional Measure 1 Program—Cost (\$Millions)

Project	Work Status	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast*	At- Completion Variance	Cost Status
a	b	С	d	e = c + d	f	g	h = g - e	I
New Benicia-Martinez Bridge Project	Construction							•
Capital Outlay Support		157.1	24.8	181.8	165.7	181.8	-	
Capital Outlay Construction		861.6	143.1	1,004.7	900.4	1,004.7	-	
Capital Outlay Right-of-Way		20.4	(0.1)	20.3	12.3	20.3	-	
Project Reserve		20.8	35.3	56.2	-	56.2	-	
Total New Benicia-Martinez Bridge Project		1,059.9	203.1	1,263.0	1,078.4	1,263.0	-	
Carquinez Bridge Replacement Project	Construction							•
Capital Outlay Support		124.4	(1.1)	123.3	118.7	123.2	(0.1)	
Capital Outlay Construction		381.2	3.3	384.5	366.8	384.3	(0.2)	
Capital Outlay Right-of-Way		10.5	-	10.5	9.9	10.5	-	
Project Reserve		12.1	(2.2)	9.9	-	10.2	0.3	
Total Carquinez Bridge Replacement Project		528.2	-	528.2	495.4	528.2	-	
I-880/SR-92 Interchange Reconstruction	Advertised							•
Capital Outlay Support		28.8	-	28.8	30.9	51.7	22.9	
Capital Outlay Construction		94.8	-	94.8	-	122.5	27.7	
Capital Outlay Right-of-Way		9.9	-	9.9	8.3	12.4	2.5	
Project Reserve		0.3	-	0.3	-	9.7	9.4	
Total I-880/SR-92 Interchange Reconstruction		133.8	-	133.8	39.2	196.3	62.5	
Program Completed Projects	Complete							
Capital Outlay Support		62.0	(4.0)	58.0	57.3	59.9	1.9	
Capital Outlay Construction		324.4	2.5	326.9	290.5	317.3	(9.6)	
Capital Outlay Right-of-Way		1.7	-	1.7	0.5	0.8	(0.9)	
Project Reserve		2.6	1.5	4.1	-	1.8	(2.3)	
Total Program Completed Projects		390.7	-	390.7	348.3	379.8	(10.9)	
Total Regional Measure 1 Program		2,112.6	203.1	2,315.7	1,961.3	2,367.3	51.6	

Within Approved Current Schedule and Budget

Potential Cost and Schedule Impacts: Possible future need for Program Contingency Allocation

Known Cost and Schedule Impacts: Request for Program Contingency Allocation forthcoming

Note: Details may not sum to totals due to rounding effects.

\* Forecasts for the Monthly Reports are generally updated on a quarterly basis in conjunction with Risk Analysis assessments for the TBSRP Projects and the TBSRP Quarterly Reports.

\*BATA will consider approval of a budget change for the South/South Detour and YBI Transition Structure Contracts in Fiscal Year 2006-2007.

# Regional Measure 1 Program—Schedule

Project	BATA Project Complete Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (02/2007)	Project Complete Schedule Forecast (02/2007)	Schedule Variance (Months)	Schedule Status	Remarks
a	b	С	d= b + c	е	f = e - d	g	h
New Benicia-Martinez Bridge Project • New Benicia-Martinez Bridge	Dec 07	-	Dec 07	Dec 07	-	•	
• I-680/I-780 Interchange Replacement	Dec 07	-	Dec 07	Feb 08	2		Final electrical work to be completed after Bridge Open to Traffic. Structure was substantially completed as of December 1, 2006. See page 45.
Open to Traffic Date	Dec 07	-	Dec 07	Dec 07	-	•	
1927 Carquinez Bridge Demolition Project	Dec 07	-	Dec 07	Mar 08	3	•	
I-880/SR-92 Interchange Reconstruction	Nov 10	-	Nov 10	Jun 11	7		Delay in the procurement of right-of-way is impacting the cost/schedule for this project. See page 49.

# Highlights of Project/Program Activities and TBPOC Actions for March 2007

## **Toll Bridge Seismic Retrofit Program**

## SFOBB East Span Seismic Replacement Project

- On the Yerba Buena Island (YBI) South/South Detour and Transition Structures contracts, the TBPOC approved on February 15, 2007 to advance foundation and retrofit work from the Transition Structure contract to the South/South Detour contract. Advancing the work will reduce overall project schedule risk by taking work off the critical path for the East Span project and will result in a net \$180 million increase in the project costs that will be covered by the existing program contingency and will not increase the AB144 program budget. Advancement of retrofit work near the Yerba Buena Island Tunnel will require a three-day closure of the Bay Bridge to replace the upper roadway from the east span to the tunnel. Currently, the closure is scheduled for the Labor Day 2007 weekend (see page 18).
- On the Self-Anchored Suspension Span (SAS) Superstructure Contract, Caltrans has accepted the baseline schedule that was submitted by the American Bridge/Fluor Joint Venture (ABF) on March 29, 2007. Zhenhua Port Machinery Company (ZPMC) of Shanghai, China is currently setting up their facilities to fabricate the steel tower and deck sections. ZPMC is preparing initial test mock-ups of the sections and plans to begin production fabrication later in 2007. ABF completed the design of the crane barge to be used to lift the heavy tower and deck sections. Barge fabrication has started in Oregon (see page 15).
- On the SAS Marine Foundations Contract, all 13 rock sockets that tie the SAS tower foundation (T1) to bedrock have been installed. The T1 footing box was set into place on March 17, 2007 (see page 13).
- On the Submerged Electrical Cable Relocation Contract, Caltrans approved the contract on January 22, 2007. The contractor has submitted a purchase order to procure the two cables to be installed from Oakland to Treasure Island (see page 21).
- On the Oakland Touchdown #1 (OTD1) contract, Caltrans advertised the contract on February 26, 2007. Bid opening is scheduled for June 5, 2007 (see page 22).

#### **SFOBB West Approach Seismic Retrofit Project**

On March 27, 2007, Caltrans shifted the eastbound Interstate 80 (I-80) traffic alignment under the new westbound structure from the Fifth Street to Second Street in San Francisco to allow for the demolition and reconstruction of the eastbound structure (see page 27).

# **Regional Measure 1 Program**

## I-880/SR-92 Interchange Project

 Caltrans advertised this contract on January 8, 2007. Bid opening is scheduled for May 5, 2007. The Project received right-of-way clearance on March 30, 2007. Expected duration of this particular project is for four (4) years (see page 49).



# **PROJECT / CONTRACT REPORTS**

# Toll Bridge Seismic Retrofit Program

San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Summary

- Skyway Contract
- Self-Anchored Suspension (SAS) E2/T1 Foundations Contract
- Self-Anchored Suspension (SAS) Superstructure Contract
- Yerba Buena Island (YBI)
  - \* Yerba Buena Island (YBI) South/South Detour Contract
  - \* Yerba Buena Island (YBI) Transition Structure Contracts
- Oakland Touchdown (OTD)
  - \* Oakland Touchdown (OTD) Submarine Cable Relocation Contract
  - \* Oakland Touchdown (OTD) #1 Contract
  - \* Oakland Touchdown (OTD) #2 Contract
- Other Major Contracts
- Other Contracts and Related Project Work

San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project Richmond-San Rafael Bridge Seismic Retrofit Project Other Completed Seismic Retrofit Projects

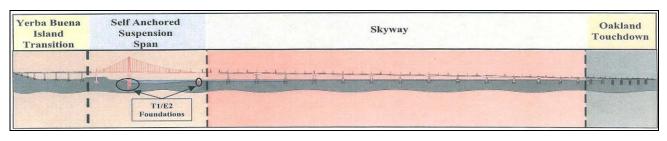
# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Summary

**Project Description:** The East Span will be seismically retrofitted through the complete replacement of the existing span. The remaining effort for this project consists of the following contracts: Skyway—construction of two parallel concrete structures, each approximately 1.3 miles in length; Self-Anchored Suspension (SAS) Foundation—construction of SAS marine foundations; SAS Superstructure—construction of a self-anchored 385-meter main span superstructure incorporating a 160-meter fabricated structural steel tower with a main cable and inclined suspenders that will support steel orthotropic decks; Yerba Buena Island (YBI) South/South Detour—design and construction of a temporary double-deck bypass structure that will detour traffic to the existing SFOBB while completing the westerly permanent tie-in structure of the new East Span at Yerba Buena Island; YBI Structures—construction of a new structure connecting the western end of the self-anchored suspension to the Yerba Buena Island viaduct, which will be retrofitted; Oakland Touchdown—at the Oakland end of the East Span, construction of two parallel, cast-in-place post-tensioned concrete viaducts, which join the skyway to the at-grade Oakland approach fill; and Existing Bridge Demolition—demolition of the existing 1936 SFOBB East Span structure after the construction and placement of traffic onto the new East Span.

SFOBB East Span Replacement Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget	Approved	Current Approved Budget	Cost To Date	Cost Forecast	Variance
<u>Contract</u> a	(07/2005) b	Changes c	(02/2007) d = b + c	(02/2007) e	(02/2007) f	Variance g = f - d
		L C			<u> </u>	
Capital Outlay Support	959.4	-	959.4	480.2	977.1	17.7
Capital Outlay	-	-	-	-	-	-
Skyway	1,293.0	-	1,293.0	1,119.6	1,293.0	-
SAS E2/T1 Foundations	313.5	-	313.5	199.3	313.5	-
SAS Superstructure	1,753.7	-	1,753.7	256.2	1,767.4	13.7
YBI South/South Detour	131.9	-	131.9	44.1	334.4	202.5
YBI Structures	299.3	-	299.3	-	276.1	(23.2)
Oakland Touchdown (OTD)	283.8	-	283.8	-	302.5	18.7
* OTD Submarine Cable				-	9.6	
* OTD No. 1 (Westbound)				-	226.5	
* OTD No. 2 (Eastbound)				-	62.0	
* OTD Electrical Systems				-	4.4	
Existing Bridge Demolition	239.2	-	239.2	-	222.0	(17.2)
Stormwater Treatment Measures	15.0	-	15.0	8.2	15.0	-
East Span Completed Projects	90.3	-	90.3	89.2	90.3	-
Right-of-Way and Environmental Mitigation	72.4	-	72.4	38.8	72.4	-
Other Budgeted Capital	35.1	-	35.1	0.6	11.0	(24.1)
TOTAL	5,486.6	-	5,486.6	2,236.2	5,674.7	188.1

Note: Details may not sum to totals due to rounding effects.



SFOBB East Span Replacement Project

**SFOBB East Span Replacement Schedule Summary** 

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
Skyway	April 2007	8	December 2007	December 2007	-
YBI South / South Detour*	July 2007	36	June 2010	June 2010	-
Stormwater Treatment Measures	March 2008	-	March 2008	June 2007	(9)
SAS E2/T1 Foundations	June 2008	(3)	March 2008	March 2008	-
Open to Traffic: Westbound	September 2011	12	September 2012	September 2012	-
SAS Superstructure	March 2012	12	March 2013	March 2013	-
Open to Traffic: Eastbound	September 2012	12	September 2013	September 2013	-
Oakland Touchdown (OTD)	December 2013	12	December 2014	December 2014	-
* OTD Submarine Cable	n/a		January 2008	January 2008	-
* OTD No. 1 (Westbound)	n/a		July 2009	October 2009	3
* OTD No. 2 (Eastbound)	n/a		November 2014	November 2014	-
YBI Transition Structure*	November 2013	12	November 2014	November 2014	-
Existing Bridge Demolition*	September 2014	12	September 2015	September 2015	-

<sup>\*</sup> Contract schedules being further assessed due to changes in SAS schedule.

**Project Status**: Construction is currently ongoing for the Skyway, YBI South/South Detour, SAS E2/T1 Foundations and Stormwater Treatment Measures contracts. Contracts in design include the OTD #1 (westbound), OTD #2 (eastbound), the YBI Transition Structure (YBITS) Contract #1, YBITS Contract #2 and Existing Bridge Demolition contract. Design of each contract is proceeding per its schedule requirements. On December 18, 2006, Caltrans opened bids for the Submarine Cable Relocation contract. Caltrans awarded the contract on January 11, 2007.

**Project Issues:** All projects except Demolition have a Risk Response Team and a Risk Register incorporating quantitative risk analyses. A preliminary risk register has also been developed for Capital Outlay Support (COS) costs, as well as a program-level risk register that captures risks common to all project. The development of a quantitative COS risk analysis is in progress. The Risk Response Teams have focused attention on developing and executing risk response actions for their most significant risks. Many of the actions have been effective, as evidenced by a reduction of risk impacts on the Skyway and E2/T1 contracts from the previous quarter. The effort to develop and execute risk response actions to mitigate the cost and schedule impacts posed by risk issues continues to be a high priority.

**Recent TBPOC Actions:** See the following contract detail pages for specific TBPOC actions on East Span contracts.

# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### **▶ SKYWAY CONTRACT**

**Contract Description:** The Skyway contract constructs two parallel pre-cast concrete approach spans from Oakland to the self-anchored suspension span near Yerba Buena Island.

**Skyway Cost Summary (\$Millions)** 

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes C	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007) e	Cost Forecast (02/2007) f	Variance g = f - d
East Span - Skyway						
Capital Outlay Support	197.0	-	197.0	156.0	197.0	-
Capital Outlay Construction	1,293.0	-	1,293.0	1,119.5	1,293.0	-
TOTAL	1,490.0	-	1,490.0	1,275.5	1,490.0	-

Note: Details may not sum to totals due to rounding effects.

**Skyway Schedule Summary** 

only may contourned	arring y				
	AB 144/SB 66		Contract Complete		
	Contract Completion	Approved	Current Approved	Contract Complete	Schedule
	Baseline	Changes	Schedule	Schedule Forecast	Variance
Contract	(07/2005)	(Months)	(02/2007)	(02/2007)	(Months)
East Span - Skyway	April 2007	8	December 2007	December 2007	-

Contract Status: The Skyway contract is currently in construction and is 94% complete as of February 20, 2007. The foundation work is complete including the installation of the fenders around six of the pier footings. The eastbound and westbound structures are 100% complete with the erection of all segments. Remaining work includes final post-tensioning of the segments to tie the segments together, installation of the cantilevered bike path and service platforms, electrical work, and other punchlist work.

#### **Contract Issues:**

Issue	Mitigating Action				
KFM issued 15 NOPC's on behalf of USI for welding issues related to the fabrication of the Steel Orthotropic Box Girders (SOBG).	USI completed the fabrication of the SOBG. All NOPC's filed were recommended to be heard by the Dispute Review Board.  NOPC's #16, 18, 22, and 29 regarding the SOBG issues was heard by the Dispute Resolution Board (DRB) in February 2007, with a two-day hearing. The Board's decision is being evaluated by Caltrans and the TBPOC.				

# **Contract Photographs**



Skyway Eastbound & Westbound



Skyway Erecting the Service Platform



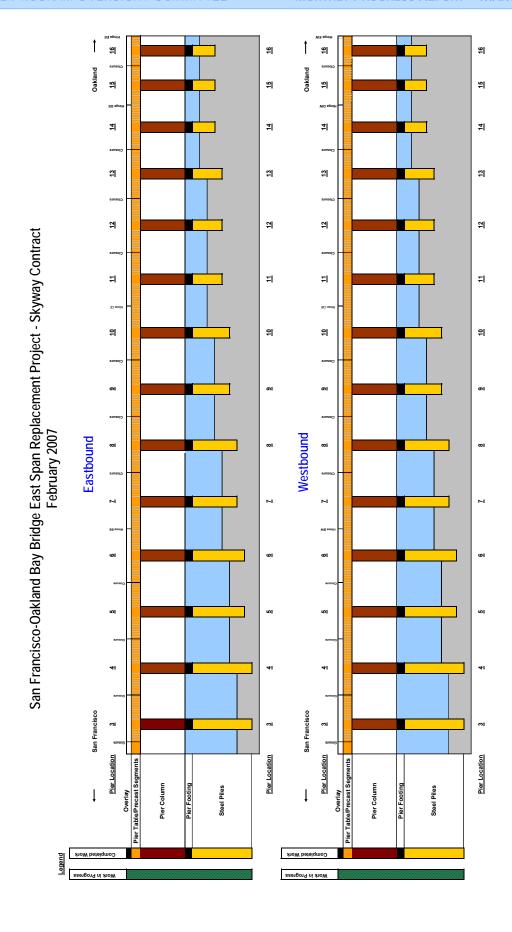
Skyway Erected Service Platform



Skyway Pouring Concrete Bridge Barrier



Skyway Sandblasting the Bridge Soffit



## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ▶ Self-Anchored Suspension (SAS) E2/T1 Foundations Contract

**Contract Description:** The Self-Anchored Suspension (SAS) E2/T1 Foundations contract constructs the main tower foundation at T1 and the adjacent east foundation at E2.

SAS E2/T1 Foundations Cost Summary (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007) e	Cost Forecast (02/2007) f	Variance g = f - d
East Span - SAS E2 / T1 Foundations						
Capital Outlay Support	52.5	-	52.5	19.1	52.5	-
Capital Outlay Construction	313.5	-	313.5	199.3	313.5	-
TOTAL	366.0	-	366.0	218.4	366.0	-

Note: Details may not sum to totals due to rounding effects.

SAS E2/T1 Foundations Schedule Summary

	AB 144/SB 66		Contract Complete		
	Contract Completion Baseline	Approved Changes	Current Approved Schedule	Contract Complete Schedule Forecast	Schedule Variance
Contract	(07/2005)	(Months)	(02/2007)	(02/2007)	(Months)
East Span - SAS E2 / T1 Foundations	June 2008	(3)	March 2008	March 2008	-

**Contract Status:** The contract is 66% complete as of February 20, 2007. At the T1 Foundation, all 13 rock sockets that tie the SAS tower foundation (T1) to bedrock have been cast in place, with only punch list work remaining. The T1 footing box was set into place off Yerba Buena Island on March 17, 2007. At the E2 Foundation, all piles have been driven into place. Work is continuing on welding the pile heads, connections and connector girders.

Contract Issues: None.

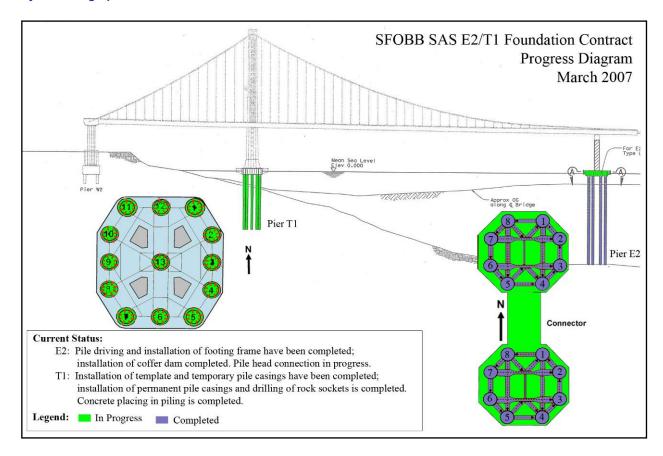


T1 Footing Box being barged through the Panama Canal

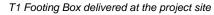


T1 Footing Box being barged through the Panama Canal

## **Project Photographs**









Pier E2 welding shelters

# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

### ▶ SELF-ANCHORED SUSPENSION (SAS) SUPERSTRUCTURE CONTRACT

**Contract Description:** The Self-Anchored Suspension (SAS) Superstructure contract constructs a signature tower span between the skyway and the Yerba Buena Island transition structure. Work on the SAS bridge has been split between three contracts—the SAS Superstructure (under construction), the SAS E2/T1 Foundation (under construction), and the SAS W2 Foundation (completed).

**SAS Superstructure Cost Summary (\$Millions)** 

Contract a	AB 144 / SB 66 Budget (07/2005) B	Approved Changes c	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007) e	Cost Forecast (02/2007) f	Variance g = f - d
East Span - SAS Superstructure						
Capital Outlay Support	214.6	-	214.6	31.5	214.6	-
Capital Outlay Construction	1,753.7	-	1,753.7	256.2	1,767.4	13.7
TOTAL	1,968.3	-	1,968.3	287.7	1,982.0	13.7

Note: Details may not sum to totals due to rounding effects.

**SAS Superstructure Schedule Summary** 

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
East Span - SAS Superstructure	March 2012	12	March 2013	March 2013	-

**Contract Status:** The contract is 18% complete as of February 20, 2007. The contractor, American Bridge Fluor Enterprises, Inc., a Joint Venture (ABF), continues to mobilize staff to the field office on Pier 7. ABF and their subcontractors have been preparing and submitting requests for information and submittals for Caltrans review and response, including the baseline schedule. The latest baseline schedule submitted by ABF was accepted by Caltrans on March 29, 2007. ABF has completed the design of the crane barge to be used to lift the heavy tower and deck sections. Fabrication has started in Oregon on the barge.

Zhenhua Port Machinery Company (ZPMC) of Shanghai, China is currently setting up their facilities to fabricate the steel tower and deck sections. ZPMC is preparing initial test mock-ups of the sections and plans to begin production fabrication later in 2007.

The forecast \$13.7 million increase in construction costs on the SAS contract, from the approved budget, reflects actions taken to encourage additional bidders on the contract.

#### **Contract Issues:**

Issue	Mitigating Action
Caltrans has identified the need for added resources to monitor work at the ZPMC steel fabrication facilities in China.	Caltrans and BATA are working together to set up facilities and to organize resources that will ensure an effective Owner's presence in the steel fabrication shops.
Potential for cost increases during construction due to steel plate conflicts. Applies to structural steel, including the towers and box girders.	Establish Working Drawing Campus with Contractor to facilitate discussion about conflicts and meet regularly. Caltrans has constructed models and identified conflicts, for which CCOs are to be prepared. The number of required mockups in the contract was reduced by addendum due to concerns about time for construction. Could continue to look at potential for mockups. Facilitated Cost Reduction Incentive Proposal (CRIP) sessions to discuss additional changes and improvements at the beginning of the contract.

Recent TBPOC Actions: In February 2007, the TBPOC approved SFOBB SAS Contract Change Order (CCO) 21, "Tower Splice Changes" at a not to exceed value of \$2.3 Million.

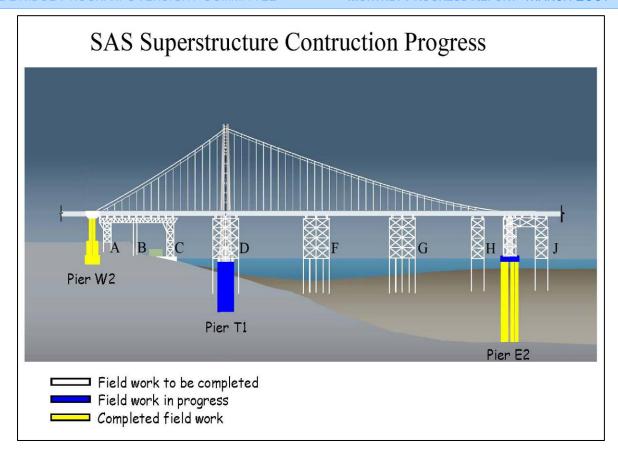
## **Contract Photographs**

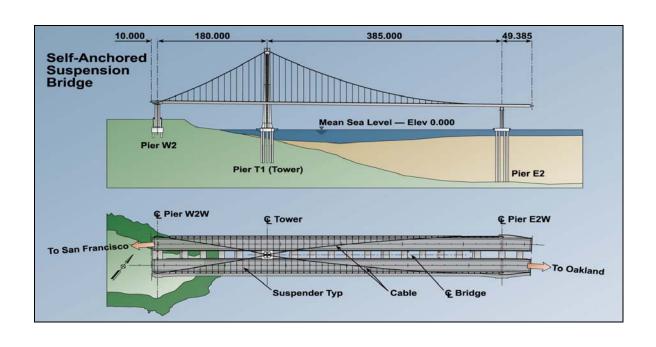


SAS Superstructure Artist Rendition



View of the Western End of the Skyway Contract that will connect with the Future SAS Contract.





## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ► YERBA BUENA ISLAND (YBI)

#### SOUTH/SOUTH DETOUR CONTRACT

Contract Description: The Yerba Buena Island (YBI) South/South Detour (SSD) Contract constructs a temporary detour from the YBI tunnel to the existing east span of the Bay Bridge. This detour maintains traffic on the existing bridge while the YBI Transition Structure Contract completes the tie-in from the SAS to the existing tunnel.

YBI South/South Detour Cost Summary (\$Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes C	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007)	Cost Forecast (02/2007)	Variance g = f - d
YBI South/South Detour						
Capital Outlay Support	29.5	-	29.5	19.7	29.5	-
Capital Outlay Construction	131.9	-	131.9	44.1	334.4	202.5
TOTAL	161.4	-	161.4	63.8	363.9	202.5

Note: Details may not sum to totals due to rounding effects.

YBI South/South Detour Schedule Summary

		AB 144/SB 66		Contract Complete		
Contract Completion		Approved	Current Approved	Contract Complete	Schedule	
		Baseline	Changes	Schedule	Schedule Forecast	Variance
	Contract	(07/2005)	(Months)	(02/2007)	(02/2007)	(Months)
	YBI South / South Detour *	July 2007	36	Jun 2010	Jun 2010	-

<sup>\*</sup> Contract schedule under assessment. See Contract Issues below.

Contract Status: The South/South Detour (SSD) contract was awarded in early 2004 to construct a temporary detour structure providing for, at that time, a new bridge opening in 2006. Due to the re-advertisement of the SAS superstructure contract in 2005, bridge opening was rescheduled to 2013, which necessitated a temporary suspension of the SSD contract and design changes. The required suspension of work and design revisions has resulted in increased cost for the SSD Contract.

In 2006, the TBPOC approved a plan to pace work on the project, to have Caltrans assume design responsibility over the east and west tie-ins, and to make changes to the detour structures to allow it to stand in place alone for a longer duration than originally intended. The SSD contract is now forecasted to be completed in 2010 in time for the revised opening date of the new bridge.

In addition to the revised contract completion date, the TBPOC approved on February 15, 2007 to advance foundation and retrofit work from the Yerba Buena Island Transition Structures (YBITS) contract to the South/South Detour contract. Advancing the work will reduce overall project schedule risk by taking work off the critical path for the East Span project while making more effective use of the extended SSD contract duration, and will enable potential acceleration of the SAS construction pending negotiation with American Bridge.

Advancing the transition structure work, completing the tie-in work under Caltrans design, and pacing of the remaining SSD work will result in a net \$180 million increase in the project costs from the approved budget. The increase will be covered by the existing program contingency and will not increase the AB144 program budget.

Prior to the suspension of the SSD contract, foundations for the temporary detour were nearly completed. Work has restarted on the contract, including fabrication of the temporary viaduct in Korea. The contractor has already made significant progress on the foundation and column at pier W3 of YBITS and has started work on retrofitting of the upper deck approach to the Yerba Buena Island Tunnel. The upper deck approach retrofit will require a three-day closure of the Bay Bridge to roll in a replacement upper roadway. Currently, the closure is scheduled for the Labor Day 2007 weekend.

Contract Issues: None.

Recent TBPOC Actions: On April 6, 2007, the TBPOC approved plans for the Labor Day 2007 weekend closure of the Bay Bridge. See contract status above.

## **Contract Photographs**



South/South Detour West Tie In Southside Grading for Retaining Wall



South/South Detour West Tie In Northside Overhang Demolition



South/South Detour Overlooking Bent 51 ready to pour



South/South Detour beams for the viaduct

# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ► YERBA BUENA ISLAND (YBI)

#### YBI TRANSITION STRUCTURE CONTRACTS

Contract Description: The YBI Transition Structure contracts will construct the mainline YBI transition structures (YBITS) that will connect the SAS portion of the new bridge to the existing YBI tunnel. YBITS #1 will construct the mainline approach structure from the new bridge to the YBI tunnel. YBITS #2 will demolish the South/South Detour (SSD) temporary structure, complete the new eastbound on-ramp, complete the bike path from the bridge to YBI and reconstruct local affected facilities at YBI. A YBI Landscaping Contract will restore slopes and vegetation in areas affected by YBI construction. Caltrans is still reviewing and finalizing YBITS contract split options.

**YBI Transition Structure Cost Summary (\$Millions)** 

<u>Contract</u> a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes C	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007)	Cost Forecast (02/2007) f	Variance g = f - d
YBI Transition Structure						
Capital Outlay Support	78.7	-	78.7	12.8	78.7	-
Capital Outlay Construction	299.3	-	299.3	-	276.1	(23.2)
TOTAL	378.0	<del>-</del>	378.0	12.8	354.8	(23.2)

Note: Details may not sum to totals due to rounding effects.

**YBI Transition Structure Schedule Summary** 

TEL TRAISHION STRUCTURE	Scriedule Sullillary				
	AB 144/SB 66		Contract Complete		
	Contract Completion	Approved	Current Approved	Contract Complete	Schedule
	Baseline	Changes	Schedule	Schedule Forecast	Variance
Contract	(07/2005)	(Months)	(02/2007)	(02/2007)	(Months)
YBI Transition Structure	November 2013	12	November 2014	November 2014	-

**Contract Status:** In February 2007, the TBPOC approved a plan to accelerate portions of the YBITS work to the SSD contract. Advancing work from the YBITS contract to the SSD contract will result in a forecast cost reduction of \$23.2 million. Caltrans is preparing the remaining portion of the YBITS contract for advertisement in 2008. See SSD Contract Status on page 18 for more information.

Contract Issues: None.

Recent TBPOC Actions: In February 2007, the TBPOC approved a plan to accelerate YBITS work on the SSD contract.

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### OAKLAND TOUCHDOWN

#### OAKLAND TOUCHDOWN SUBMARINE CABLE RELOCATION CONTRACT

**Contract Description:** The OTD Submarine Cable Contract will replace the existing submarine electrical cable from Oakland to Treasure Island, and will be completed ahead of OTD Contract No. 1 to avoid possible construction conflicts.

Oakland Touchdown Submarine Cable Relocation Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	Variance
a	b	С	d = b + c	е	f	g = f - d
OTD Submarine Cable						
Capital Outlay Support	-	-	-	0.4	3.0	-
Capital Outlay Construction	-	-	-	-	9.6	-
TOTAL	-	-	-	0.4	12.6	-

Note: Details may not sum to totals due to rounding effects. The allocation of AB144/SB 66 budgets is proceeding. Budget amount is TBD. Overall OTD budgets and forecasts are shown on page 2.

Oakland Touchdown Submarine Cable Relocation Schedule Summary

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
OTD Submarine Cable	-	-	January 2008	January 2008	-

**Contract Status:** On January 11, 2007, Caltrans approved a contract with Manson Construction for the replacement of an existing submerged electrical cable from Oakland to Treasure Island with two cables located away from the Oakland Touchdown construction area. The contractor is currently preparing contract submittals for Caltrans review and has placed an order for the cabling. The cable is expected in the Bay Area in the summer of 2007.

The current contract allotment to install two submarine electrical cables is \$11.5 million. Additional non-program funding to support this allocation beyond the \$9.6 million of available programs funds has been made available by the Treasure Island Development Authority.

#### **Contract Issues:**

Issue	Mitigating Action			
If the contractor cannot procure and install the cables within the specified timeframes, the cable relocation project could potentially delay work on the OTD #1 contract.	The cable has been ordered by the Contractor, and work around specification language has been developed for the OTD #1 contract in case the cables are delayed.			

# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### **▶ OAKLAND TOUCHDOWN**

#### OAKLAND TOUCHDOWN #1 CONTRACT

Contract Description: The Oakland Touchdown #1 Contract includes construction of all marine foundations, and land foundations (except for the eastbound abutment), westbound bridge section, and one frame of the eastbound bridge section and roadway approach for the section connecting the new Skyway portion to the roadway west of the Oakland Toll Plaza. This contract also constructs the electrical substation and the eastbound detour roadway. Traffic will not be placed on the detour until later during OTD #2.

Oakland Touchdown #1 Cost Summary (\$Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007)	Cost Forecast (02/2007) f	Variance g = f - d
Oakland Touchdown #1						
Capital Outlay Support	-	-	-	3.0	49.9	-
Capital Outlay Construction	-	-	-	-	226.5	-
TOTAL	-	-	-	3.0	276.4	-

Note: Details may not sum to totals due to rounding effects. The allocation of AB144/SB 66 budgets is proceeding. Budget amount is TBD. Overall OTD budgets and forecasts are shown on page 2.

Oakland Touchdown #1 Schedule Summary

Baseline C		Approved Changes (Months)	Contract Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
Contract	(0712000)	(Mortaria)	(02/2007)	(UZIZUUT)	(INIOTHITIS)
Oakland Touchdown #1	-	-	July 2009	October 2009	3

Contract Status: Design work is complete. Plans, Specifications, and Engineer's Estimate (PS&E) were submitted to the Office Engineer on September 1, 2006. Contract was advertised on February 26, 2007 with bid opening scheduled for June 2007. The contract is being advertised with a A+B specification that requires contractors to take into account contract duration as part of their bid. The A+B specification may accelerate completion of the contract earlier than the current October 2009 forecast completion date. (Note that the A+B requirement only applies for the milestone to complete the westbound bridge section of the contract).

#### **Contract Issues:**

Issue	Mitigating Action
Delays and cost increases due to conflicts from delays to the relocation of the submarine cable.	Caltrans will be incorporating work-around specification language in the OTD 1 contract to mitigate delays due to the cable and has extended the forecast completion date of the contract to October 2009. The revised completion date will not impact the overall completion date of the project.

Recent TBPOC Actions: On April 6, 2007, the TBPOC approved addenda to the contract.

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### OAKLAND TOUCHDOWN

#### OAKLAND TOUCHDOWN #2 CONTRACT

**Contract Description:** The Oakland Touchdown #2 Contract includes construction of the remaining eastbound bridge section and roadway approach for the section connecting the new Skyway portion to the roadway west of the Oakland Toll Plaza. This work would occur once the westbound traffic is shifted onto the new SAS. Caltrans is also investigating the option of including the Oakland Touchdown Electrical Systems Contract, which will incorporate most of the electrical elements from OTD, as well as from other segments of the East Span.

Oakland Touchdown #2 Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	-	-	-	0.2	17.2	-
Capital Outlay Construction						
OTD #2	-	-	-	-	62.0	-
OTD Electrical Systems	-	-	-	-	4.4	-
TOTAL	-	-	-	0.2	83.6	-

Note: Details may not sum to totals due to rounding effects. The allocation of AB144/SB 66 budgets is proceeding. Budget amount is TBD. Overall OTD budgets and forecasts are shown on page 2.

Oakland Touchdown #2 Schedule Summary

outland rodondomin	AD ALLION //		0 1 10 11		
	AB 144/SB 66		Contract Complete		
	Contract Completion	Approved	Current Approved	Contract Complete	Schedule
	Baseline	Changes	Schedule	Schedule Forecast	Variance
Contract	(07/2005)	(Months)	(02/2007)	(02/2007)	(Months)
Oakland Touchdown #2	-	-	November 2014	November 2014	-

**Contract Status:** Design work for the structures portion of OTD Contract No. 2 is substantially complete. The contract will be advertised in 2010 in time for opening the SAS in the eastbound direction. Determination of contract scope for the Oakland Touchdown Electrical Systems is underway. Caltrans is also considering the option of incorporating this work into the Oakland Touchdown #2 contract.

Contract Issues: None.

# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### **▶ OTHER MAJOR CONTRACTS**

Contract Description: Other Major Contracts include the Stormwater Treatment Measures contract, which will implement best practices for stormwater runoff treatment at the SFOBB toll plaza; and the Existing Bridge Demolition contract, which will include the complete removal of the existing 1936 east span following the opening of the new bridge.

Other Major Contracts Cost Summary (\$Millions)

Contract A	AB 144 / SB 66 Budget (07/2005)	Approved Changes c	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007) e	Cost Forecast (02/2007)	Variance g = f - d
Capital Outlay Support	85.7	_	85.7	42.1	86.7	1.0
Capital Outlay Construction				-		-
Existing Bridge Demolition	239.2	-	239.2	-	222.0	(17.2)
Stormwater Treatment Measures	15.0	-	15.0	7.3	15.0	-
Total Capital Outlay Construction	254.2	-	254.2	7.3	237.0	(17.2)
TOTAL	339.9	-	339.9	49.4	323.7	(16.2)

Note: Details may not sum to totals due to rounding effects.

Other Major Contracts Schedule Summary

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)	% Design Comp.
Existing Bridge Demolition	September 2014	12	September 2015	September 2015	-	10
Stormwater Treatment Measures	March 2008	-	March 2008	June 2007	(9)	N/A

#### **Contract Status:**

Stormwater Treatment Measures: The contract is 56% complete as of February 20, 2007. Some delays in the work have been experienced due to nesting birds, buried man-made objects, unidentified utilities, and discovery of unsuitable materials. The current schedule forecast shows an early completion date due to an accelerated award of the contract by Caltrans and a reduced construction contract duration that was bid by the contractor as part of an A+B bid.

Bridge Demolition: Design work has been temporarily suspended to assign engineering resources to higher priority tasks, and will resume at a later time. The contract schedule completion date has been extended by 12 months due to a 12-month SAS contract extension. The \$16.2 million decrease in construction costs for the Existing Bridge Demolition contract is due to a re-evaluation of cost escalation rates for the contract.

Contract Issues: None.

# **Contract Photographs**



Pump Station 4B Control Room



Inlets at Location 2



Pump Station 3B



DIP Ready to Install in Jacked Pipe



Grouting Jacked Pipe



Jacking Operation A7 Line

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## **▶ OTHER COMPLETED CONTRACTS AND RELATED WORK**

Summary Description: Substantial work has already been performed on the SFOBB East Span Replacement project to facilitate construction of the mainline construction contracts.

Other Contracts and Related Work Cost Summary (\$Millions)

<u>Contract</u>	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007)	Cost Forecast (02/2007)	Variance g = f - d
Capital Outlay Support	227.0	-	227.0	209.0	226.0	(1.0)
Right-of-Way and Environmental Mitigation	72.4	-	72.4	38.8	72.4	-
Capital Outlay Construction						-
SAS W2 Foundations	26.4	-	26.4	25.8	26.4	-
YBI/SAS Archaeology	1.1	-	1.1	1.1	1.1	-
YBI - USCG Road Relocation	3.0	-	3.0	2.8	3.0	-
YBI - Substation and Viaduct	11.6	-	11.6	11.3	11.6	-
Oakland Geofill	8.2	-	8.2	8.2	8.2	-
Pile Installation Demonstration Project	9.2	-	9.2	9.2	9.2	-
Existing East Span Retrofit	30.8	-	30.8	30.8	30.8	-
Total Capital Outlay Construction Completed	90.3	-	90.3	89.2	90.3	-
TOTAL	389.7	-	389.7	337.0	388.7	(1.0)

Note: Details may not sum to totals due to rounding effects.

Other Contracts and Related Work Schedule Summary

Project	Actual Project Completion Date
Existing East Span Retrofit	March 1998
Interim Retrofit	July 2000
Pile Installation Demolition Project	December 2000
YBI / SAS Archaeology	January 2003
Oakland Geofill	April 2003
YBI – USCG Road Relocation	June 2004
SAS W2 Foundations	October 2004
YBI Substation and Viaduct	May 2005

Summary Status: Construction has been completed on the above-listed contracts. Caltrans continues to work with various environmental agencies to conduct compliance inspections and monitor and mitigate any environmental impacts from the project.

Contract Issues: None.

# San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project

**Project Description:** The SFOBB West Approach Replacement Project will replace the entire west approach structure from 5<sup>th</sup> Street to the west anchorage of the existing west spans of the SFOBB while maintaining existing traffic lanes for the weekday commute.

SFOBB West Approach Replacement Cost Summary (\$Millions)

Project a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes C	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007) e	Cost Forecast (02/2007) f	Variance g = f - d
West Approach						
Capital Outlay Support	120.0	-	120.0	89.3	120.0	-
Capital Outlay Construction	309.0	-	309.0	229.4	309.0	-
TOTAL	429.0	-	429.0	318.7	429.0	-

Note: Details may not sum to totals due to rounding effects.

**SFOBB West Approach Replacement Schedule Summary** 

Proiect	AB 144/SB 66 Project Completion Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
Troject	(0112003)	(INDITITIS)	(02/2007)	(02/2007)	(MOTILIS)
West Approach	August 2009	-	August 2009	August 2009	-

**Project Status:** Construction is 77% complete as of February 20, 2007. Seismic retrofit construction is continuing throughout the project. Major ongoing work during February included the continuation of work on the 5th Street and Harrison Street ramps, the 4th Street retrofit work, and the interim eastbound detour (the "ST6D" alignment).

Eastbound (EB) lower deck traffic was switched on to the temporary ST6D EB alignment on March 27, 2007. In an effort to make the local residents and business communities aware of this switch, an extensive media outreach starting March 12, 2007 has been scheduled.

Immediately following this cross-over, a revised demolition plan that compressed the demolition schedule from 110 to 17 days will commence. This plan has been presented to the PMT, the local residents and Municipal Transportation Authority and has been approved for negotiation with the contractor.

**Project Issues:** 

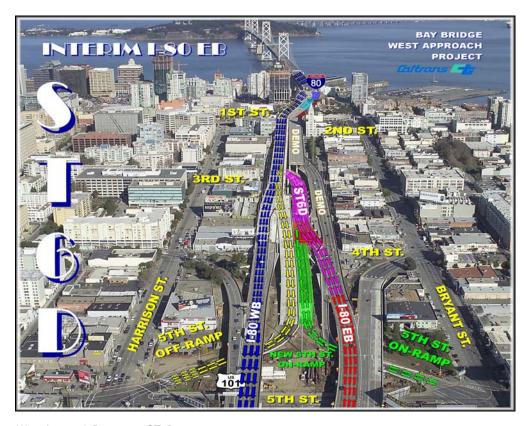
r rojott locato.					
Issue	Mitigating Action				
Pile investigation and testing for the identification of pile anomalies must be completed in a timely manner so as to avoid construction impact.	Work on piles has progressed. Caltrans Construction coordinates closely with Structure Design and METS daily on pile investigation and testing issues, and proactively monitors the efforts. Tracking of the testing effort is done for each individual pile. Team participation in Risk Management meetings has proven to be valuable in addressing this issue.				

**Recent TBPOC Actions:** In February 2006, Caltrans was given approval by the TBPOC to negotiate Change Order #149 for the realignment of ST6D (Stage 5). This will mitigate traffic risks associated with the as planned eastbound detour alignment.

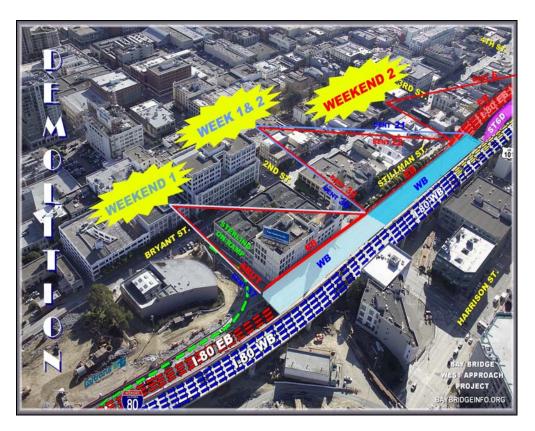
# **Project Photographs**



West Approach Project Limits



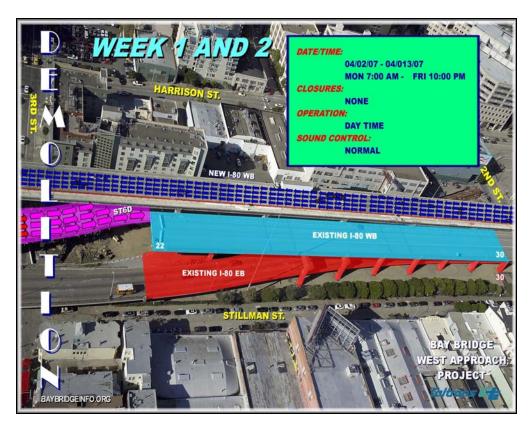
West Approach Progress – ST6D



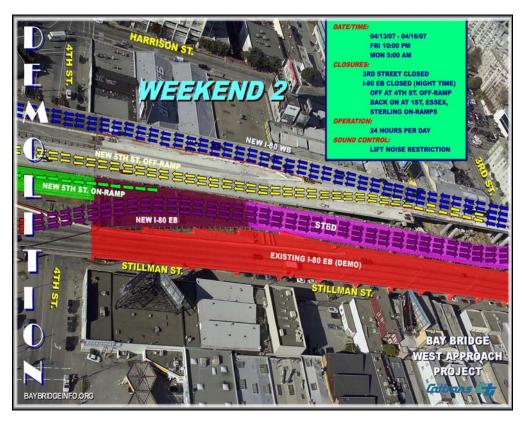
West Approach Demolition Plan



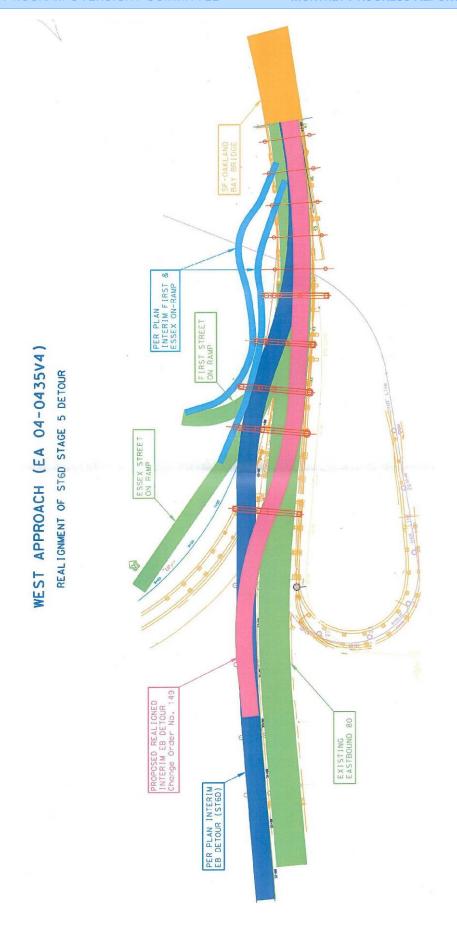
West Approach Demolition Plan - Weekend 1



West Approach Demolition Plan – Week 1 and 2



West Approach Demolition Plan – Weekend 2



# Toll Bridge Seismic Retrofit Program

## Richmond-San Rafael Bridge (RSRB) Seismic Retrofit Project

Project Description: The Richmond-San Rafael (RSR) Bridge Seismic Retrofit Project strengthened the existing bridge to withstand the effects of a large seismic event. As part of the retrofit work, Caltrans performed work to strengthen the bridge foundations, replace the existing west trestle and the main channel fenders and complete the joint rehabilitation of the bridge deck. (The RM1 work is reported in the RM1 section of the report.)

#### **RSRB Seismic Retrofit Cost Summary (\$Millions)**

Project a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes C	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007)	Cost Forecast (02/2007) f	Variance g = f - d
RSRB Seismic Retrofit						
Capital Outlay Support	134.0	(7.0)	127.0	125.9	127.0	-
Capital Outlay Construction & Right-of-Way	780.0	(82.0)	698.0	665.6	698.0	-
TOTAL	914.0	(89.0)	825.0	791.5	825.0	-

Note: Details may not sum to totals due to rounding effects.

#### **RSRB Seismic Retrofit Schedule Summary**

Project	AB 144/SB 66 Project Completion Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
RSRB Seismic Retrofit	August 2005	-	August 2005	October 2005	2
RSRB Public Access Project	NA	-	May 2007	May 2007	-

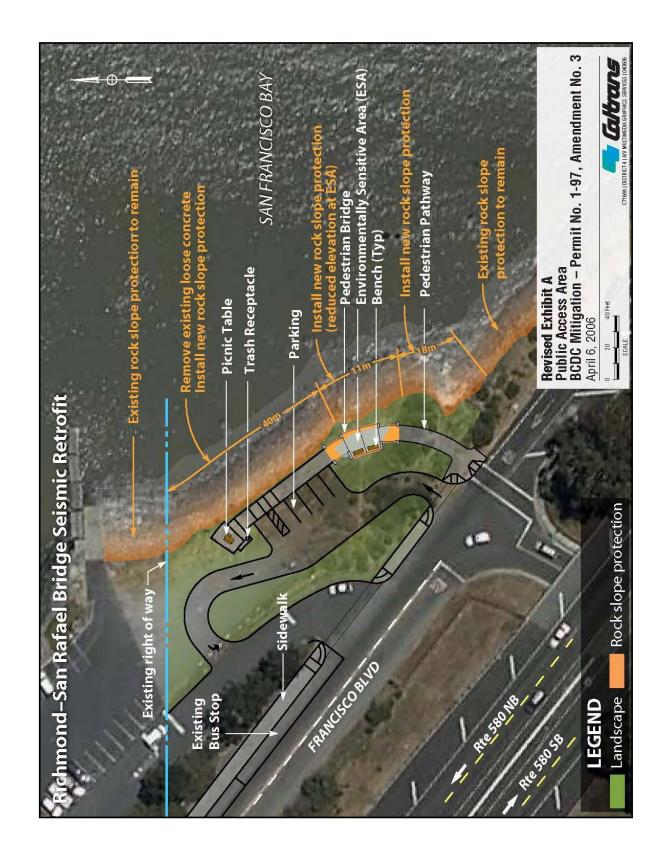
Project Status: The retrofit construction contract was completed and accepted on October 28, 2005. Project savings in the amount of \$89 million was transferred to the program contingency in October 2006.

Caltrans has submitted the project plans and specifications for a public access lot on the Marin side of the bridge to comply with a Bay Conservation and Development Commission (BCDC) permit condition. (See the exhibit on page 33.) Bids were opened on December 1, 2006. Seven bids were received and the contract was awarded to Ghilloti Bros. Inc. submitting the apparent lowest A+B bid of \$1,005,863.40, as compared with the Engineer's Estimate of \$1,072,157.25. This contract is underway and is scheduled to be completed in summer 2007.

Contract Issues: None.

**Recent TBPOC Actions:** None.

<sup>\*</sup> The seismic retrofit contract included work to rehabilitate the bridge deck joints. Although the deck joint work was funded from RM1 toll funds, the work is also eligible for Toll Bridge Seismic Retrofit Program funding. In July 2005, BATA rescinded \$16.9 million in RM1 funds for the deck joint work to make additional RM1 funds available for the New Benicia-Martinez Bridge Project. An equivalent amount of seismic funds will be used on the deck joint work, which is included in the budget above.



# Toll Bridge Seismic Retrofit Program

## Other Completed Seismic Retrofit Projects

Summary Description: Caltrans has already completed the seismic retrofits of the West Spans of the SFOBB, the existing 1958 Carquinez Bridge, the existing Benicia-Martinez Bridge, the San Mateo-Hayward Bridge, and two former toll bridges in Southern California.

Other Completed Seismic Retrofit Projects Cost Summary (\$Millions)

Project a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes C	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007) e	Cost Forecast (02/2007) F	Variance g = f - d
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit Project	307.9	-	307.9	301.1	307.9	-
Carquinez Bridge Retrofit Project	114.2	-	114.2	114.2	114.2	-
Benicia-Martinez Bridge Retrofit Project	177.8	-	177.8	177.8	177.8	-
San Mateo-Hayward Bridge Retrofit Project	163.5	-	163.5	163.4	163.5	-
Vincent Thomas Bridge Retrofit Project	58.5	-	58.5	58.4	58.5	-
San Diego-Coronado Bridge Retrofit Project	103.5	-	103.5	102.6	103.5	-
TOTAL	925.4	-	925.4	917.5	925.4	-

Note: Details may not sum to totals due to rounding effects. Capital Outlay Support and Capital Outlay have been combined.

Other Completed Seismic Retrofit Projects Schedule Summary

Project	Actual Project Completion Date
Vincent Thomas Bridge Retrofit	May 2000
San Mateo-Hayward Bridge Retrofit	June 2000
Carquinez Bridge Retrofit	January 2002
San Diego-Coronado Bridge Retrofit	June 2002
Benicia-Martinez Bridge Retrofit	August 2002
SFOBB West Span Seismic Retrofit	June 2004

Summary Status: Construction has been completed on the above-listed projects. The Estimate at Completion amounts shown above includes allowances for minor project closeout costs.

Contract Issues: None.

Recent TBPOC Actions: None.

# Toll Bridge Seismic Retrofit Program

## Other Toll Bridges

#### **Dumbarton and Antioch Bridges**

The original design of the Dumbarton and Antioch Bridges were based on design criteria developed after the 1971 San Fernando Earthquake. In the early 1990's, Caltrans determined that these two structures had the seismic resistant features required by the post-1971 codes and were not likely to be vulnerable during a major seismic event. Since that time, Caltrans has pursued an aggressive seismic research program. Based on the results of this program, Caltrans significantly revised its seismic design practice in the late 1990's. Consistent with recommendations by the Caltrans Seismic Advisory Board, Caltrans regularly reassesses the seismic risk and performance of its bridges. Due to the tremendous changes in seismic design practice that have occurred since the design of the Dumbarton and Antioch bridges, a comprehensive assessment of the potential need and scope for seismic retrofit based on current knowledge is advised.

#### **Vulnerability Studies**

In late 2004, Caltrans initiated vulnerability studies on the Dumbarton and Antioch bridges. The purpose of these studies was to determine if the bridges would meet current seismic performance standards. The studies were essentially completed in May 2005. They were not complete global analyses, but rather investigations of selected bents modeled as independent structures. The analyses were limited in scope and based on as-built plans and currently available geotechnical information. The superstructure response was not analyzed.

The Dumbarton and Antioch Bridges have many seismic resistant features, and the results of the vulnerability studies indicate that the bridges should perform well in a moderate seismic event. However, during a major seismic event, some potential vulnerabilities (summarized below) become apparent.

Foundation response generally governs performance. The piles may plunge axially and potentially cause permanent footing rotations.

Potentially large foundation displacements and rotations may result in deformations that can't be easily repaired.

The capacity of the ductile columns is greater than those of the bent cap, pile cap, pile and superstructure. As a result, the latter elements may be damaged in a major event, especially if the foundation is retrofitted.

Given the limitations of the studies, there was insufficient evidence to conclusively determine the performance of the bridges during a maximum credible earthquake (MCE). While the Dumbarton and Antioch bridges may meet performance standards, a more comprehensive technical study is necessary to understand the performance of these structures during an MCE event. A study of this level is necessary to accurately determine the structures' responses and to develop any necessary retrofit strategies. A comprehensive geotechnical study using the latest analysis techniques is likely necessary in order to perform this level of analysis.

#### **Sensitivity Analysis**

As a follow-up to the Vulnerability Study, a sensitivity analysis was completed on a single representative bent used in the Vulnerability Study (Bent 23 of the Dumbarton Bridge). The goal of the analysis was to determine the structural response associated with uncertainties in the geotechnical data. An envelope of soil conditions (best-case and worst-case scenarios) was used in the analysis.

The results from the sensitivity analysis indicate that the seismic response of the bridge is largely dependant on the soil conditions and that a comprehensive geotechnical investigation is essential for understanding the bridge's performance during a major seismic event. A work plan was developed to assess the extent of geotechnical work needed for a refined seismic analysis and to assess the required performance levels for each structure. Caltrans has completed the value analysis to scope the geotechnical investigation that will be required to complete the strategy. The final report was issued on July 24, 2006.

#### **Cost and Schedule**

A preliminary cost estimate, schedule and initial risk analysis have been developed to complete a comprehensive seismic analysis for each bridge. The preliminary estimate and schedule were developed as a baseline that assumed a complete geotechnical and geophysical investigation would be required on each bridge.

#### **Current Progress**

In June 2006, BATA approved \$17.8 million in funding to proceed with the comprehensive seismic analysis of the bridges. By September 2006, BATA entered into a contract with Earth Mechanics to conduct geotechnical and geophysical investigations, which have been on-going since December 6, 2006.

At the Dumbarton Bridge, all land and marine drilling have been completed.

At the Antioch Bridge, 28 of the 30 on-land drilling have been completed and also the Marine drilling operations have been completed.

A bathymetric survey (the measurement of the depth from the water surface to the mudline) has been completed at both bridges. This survey will provide the topography of the bay mud in the vicinity of each bridge.

Caltrans is currently reviewing the new geotechnical data, as well as existing geotechnical data. Caltrans began the structural analysis to complete the seismic retrofit strategies for each bridge. Caltrans have also been working with the Seismic Advisory Peer review panel on the status of the project.



# **PROJECT / CONTRACT REPORTS**

# Regional Measure 1 Program

New Benicia-Martinez Bridge Project Summary

- New Benicia-Martinez Bridge Contract
- Other Contracts and Related Project Activities

New Carquinez Bridge Project

Richmond-San Rafael Bridge Deck Overlay Project Interstate 880 / State Route 92 Interchange Reconstruction Other Completed Regional Measure 1 Projects

- San Mateo-Hayward Bridge Widening Project
- Richmond Parkway Project
- Bayfront Expressway Widening Project
- Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Project

# Regional Measure 1 Program

## New Benicia-Martinez Bridge Project Summary

Project Description: The new Benicia-Martinez Bridge project constructs a new parallel bridge just east of the existing bridge. The project will include reconstructed interchanges to the north and south of the bridges and a new toll plaza and administration building in Martinez.

New Benicia-Martinez Bridge Project Cost Summary (\$Millions)

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	Variance
a	В	С	d = b + c	e	f	g = f - d
Capital Outlay Support	157.1	24.8	181.8	165.7	181.8	-
Right-of-Way and Others	20.4	(0.1)	20.3	12.3	20.3	-
Capital Outlay						-
New Bridge	672.0	100.9	772.9	724.0	772.9	-
I-680/I-780 Interchange Replacement	76.3	22.5	98.8	83.7	98.8	-
I-680/Marina Vista Interchange Reconstruction	51.5	8.1	59.6	54.7	59.6	-
New Toll Plaza	24.3	2.0	26.3	22.8	26.3	-
Existing Bridge & Interchange Modifications	17.2	10.9	28.1	-	28.1	-
Other	20.3	(1.3)	19.0	15.2	19.0	-
Project Reserve	20.8	35.3	56.2	-	56.2	-
TOTAL	1,059.9	203.1	1,263.0	1,078.4	1,263.0	-

Note: Details may not sum to totals due to rounding effects.

**New Benicia-Martinez Bridge Project Schedule Summary** 

Contract	BATA Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
I-680/Marina Vista Interchange Reconstruction	March 2006	1	April 2006	April 2006	-
New Toll Plaza	June 2006	-	June 2006	February 2007	8
New Benicia-Martinez Bridge	December 2007	-	December 2007	December 2007	-
I-680/I-780 Interchange Replacement	December 2007	-	December 2007	February 2008	2
Open to Traffic	December 2007	-	December 2007	December 2007	-
Existing Bridge & Interchange Modifications	December 2009	-	December 2009	December 2009	-

<sup>\*</sup>See page 45 for an explanation of change in schedule forecast.

<sup>\*</sup> The budget and estimate at completion includes approximately \$33 million in non-toll bridge funds (Proposition 192 and SHOPP).

**Project Status:** All major construction projects necessary to open the bridge are currently in construction. Numerous foundation and superstructure issues have significantly delayed the new bridge contract. See the following contract detail pages for more information. Note that the remaining expenditures required on the "Right-of-Way and Others" category represent environmental permitting and mitigation.

Project Issues: None.

**Recent TBPOC Actions:** See the following contract detail pages for more information.

## **Project Photographs**



Aerial Photo of the Benicia-Martinez Bridges



New Benicia-Martinez Progress



Operations Building & Courtyard Looking West



Toll Plaza Administration Building

# **Project Photographs Cont'd.**



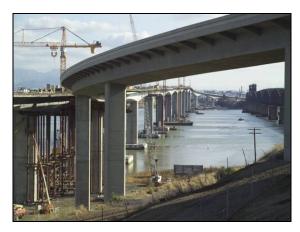
Aerial Photo of the Benicia-Martinez Bridges



Barrier Rail Construction at New Bridge Photo



Barrier Rail Construction at New Bridge Photo



Benicia-Martinez Progress Photo

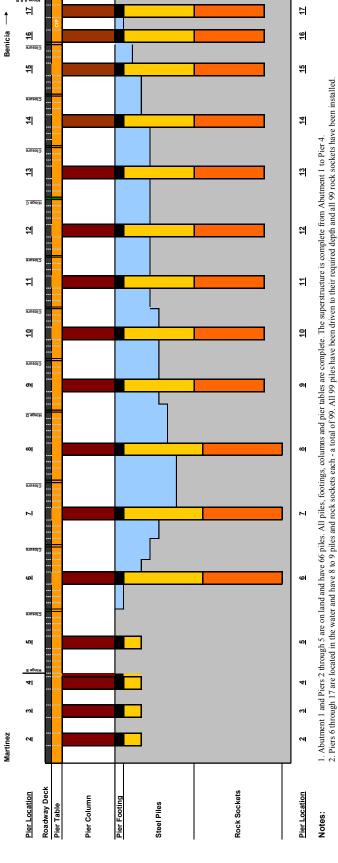


Benicia-Martinez Progress Photo



Benicia-Martinez Progress Photo

New Benicia-Martinez Bridge Progress Diagram January 2007



3. Piers 6 through 17 have two-part footings. Piers 6, 16 and 17 have a cast-on-location tower section and a cast-in-place (CIP upper section, which are lowered onto the piles. All three footings are complete. Piers 7 through 15 have a precast lower section that is set on the piles and a cast-in-place (CIP) upper section. All nine precast footings have been set and all CIP footings are complete.

4. All Stage 2 footings have been poured and stressed.

5. All pier tables are complete as of the end of May 2006.

6. Piers 4 through 15 have 344 cast-in-place cantilevered superstructure segments. All of the three-hundred and forty-four (344) segments (100%) have been cast to-date. Hinges A, B, E and D are completed and Hinge C is still in progress. All nine span closures have been poured. Span 13 closure, which was the last closure to be poured was poured on 12/19/06.

7. The cast-in-place on falseworks superstructure south of Pier 4 is substantially complete, except for the bridge deck repair work, which are still to be done. The structure north of Pier 15 is substantially complete, including the lower and the upper hinge seats at Hinges A and B.

# Regional Measure 1 Program

# New Benicia-Martinez Bridge Project

#### ▶ New Benicia-Martinez Bridge Contract

**Contract Description:** The new bridge contract constructs a new cast-in-place segmentally constructed reinforced concrete bridge just east of the existing bridge. The new bridge will carry five lanes of eastbound I-680 traffic towards Benicia.

New Benicia-Martinez Bridge Cost Summary (\$Millions)

Contract a	BATA Budget (07/2005) b	Approved Changes c	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007) e	Cost Forecast (02/2007) f	Variance q = f - d
New Benicia-Martinez Bridge						Ĭ
Capital Outlay Support	84.9	7.7	92.6	84.0	92.6	-
Capital Outlay Construction	672.0	100.9	772.9	724.0	772.9	-
TOTAL	756.9	108.6	865.5	808.0	865.5	-

Note: Details may not sum to totals due to rounding effects.

**New Benicia-Martinez Bridge Schedule Summary** 

	BATA Contract Completion	Approved	Contract Complete Current Approved	Contract Complete	Schedule
Contract	Baseline (07/2005)	Changes (Months)	Schedule (02/2007)	Schedule Forecast (02/2007)	Variance (Months)
New Benicia-Martinez Bridge	December 2007	-	December 2007	December 2007	-

Contract Status: The contract is 94 % complete based on the current revised schedule. All substructure and superstructure works have been completed. The final closure on the job was poured on December 20, 2006. Significant electrical work activities, including installation of power and communication conduits/ junction boxes in frames 1 & 2 barriers, installation of cable trays and lighting fixtures in girder box frames 2 & 3, installation of traffic equipment at the top deck extended platforms, installation of fiber optic, ISDN, boxes and conduits inside the box girder, and seismic monitoring boxes/conduits at spans 5 thru 16, were completed during the period. Work on the Span 6 repair continued with scheduled concrete pour back in early March 2007 to be followed by span tendons stressing. The span 6 platform is expected to be lowered after the pour and will be used for the Span 11 repair. In the meantime, the temporary access platform was hoisted at Span 9 for closure repair on February 26, 2007, and the demolition of the soffit began on March 1, 2007. Miscellaneous work, such as punchlist work, exterior finish, grinding, profilograph, prep work for grouting spans and continuity tendons and installation of ship ladders for the fixed platforms, installation of bumpers and movable maintenance travelers, have either been completed during this period or continuing. The critical path includes the closure pour repairs at Span 6 & 11 and the completion of the Seismic Monitoring System.

Consistent with BATA's Fastrak strategic plan, plans are progressing for the implementation of open road tolling (ORT) at the toll plaza, which involves the demolition of the toll booths. The booth demolition has been completed. Work on installing and testing the ORT equipment is expected to start in April 2007. ORT equipment is expected to be completed in August 2007.

#### **Contract Issues:**

#### Issue

## **Mitigating Action**

During stressing of steel span tendons, tie the bridge piers at spans 6, 9, and 11, Caltrans discovered that some concrete had delaminated at the bottom of several of the segments.

To repair the delamination, Caltrans has directed the contractor to repair the affected delaminated concrete at the closure soffits and issued CCO # 166 for these tasks. Closure repair work at Span 6 is almost complete, while work has just started on Span 9. These repairs should not impact the opening date of the bridge and will funded from existing contract contingency funds.

Recent TBPOC Actions: None.

## **Contract Photographs**



New Bridge Progress Photo



New Bridge Progress Photo



New Bridge Progress Photo



New Bridge Progress Photo

# Regional Measure 1 Program

## New Benicia-Martinez Bridge Project Summary

#### **▶ OTHER CONTRACTS AND RELATED PROJECT ACTIVITIES**

**Contract Description:** Contracts related to the new Benicia-Martinez Bridge project involve the construction of a new toll plaza south of the new bridge in Contra Costa County with 17 toll booths, including two high-occupancy vehicle (HOV) bypass lanes, and the reconstruction of the I-680/Marina Vista Road and I-680/I-780 interchanges.

Other Contracts and Related Activities Cost Summary (\$Millions)

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	72.2	17.0	89.2	81.7	89.2	-
Right-of-Way and Environmental Mitigation	20.4	(0.1)	20.3	12.3	20.3	-
Capital Outlay Construction						-
I-680/I-780 Interchange Replacement	76.3	22.5	98.8	83.7	98.8	-
I-680/Marina Vista Interchange Reconstruction	51.5	8.1	59.6	54.7	59.6	-
New Toll Plaza	24.3	2.0	26.3	22.8	26.3	-
Existing Bridge & Interchange Modifications	17.2	10.9	28.1	-	28.1	-
Others	20.3	(1.3)	19.0	15.2	19.0	-
Total Capital Outlay Construction	189.6	42.2	231.8	176.4	231.8	-
TOTAL	282.2	59.1	341.3	270.4	341.3	-

Note: Details may not sum to totals due to rounding effects.

**Other Contracts and Related Activities Schedule Summary** 

Contract	BATA Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
I-680/Marina Vista Interchange Reconstruction	March 2006	1	April 2006	April 2006	-
New Toll Plaza	June 2006	-	June 2006	May 2007	11
I-680/I-780 Interchange Replacement	December 2007	-	December 2007	February 2008	2
Existing Bridge & Interchange Modifications	December 2009	-	December 2009	December 2009	-

#### **Contract Status:**

**Toll Plaza and Administration Building:** The contract is 99% complete based on contractor payment. The Contractor has completed all on the Operations Building, Toll Plaza and Courtyard. Once the Plant Establishment Period is up, the contract can be accepted. The Resident Engineer estimates accepting the contract by May 15, 2007. A number of notices of potential claims that have been filed by the Contractor remain to be resolved, but this will have no impact on the bridge Open-to-Traffic date.

**I-680/I-780 Interchange:** The contract remains approximately 96% complete based on the current revised schedule. To-date, all of the bridge structures are substantially complete. Final electrical work for the new Benicia-Martinez Bridge and the interchange will not be completed until after the new bridge is complete.

**I-680/Marina Vista Interchange:** The contract is 100% complete as of May 12, 2006, and has been accepted by Caltrans. Caltrans and the contractor are currently resolving the final payment for work on the contract. It is anticipated that a final estimate will be run in April and all issues resolved.

**Wetland Mitigation:** The contract is 100% complete. The Contract Completion Acceptance (CCA) was submitted to Caltrans Headquarters for their approval on March 3, 2006. The Proposed Final Estimate (PFE) has been reviewed and accepted by the Contractor.

**Recent TBPOC Actions:** During the February 2007 TBPOC meeting, the TBPOC approved \$2M for the 680/780 I/C CCO # 135, Impacts on Inefficiencies and TRO, which is part of the global escalation settlement with the Contractor.

# Regional Measure 1 Program

## New Carquinez Bridge Project

**Project Description:** The new Carquinez Bridge project involves constructing a new suspension bridge west of the existing bridges with four westbound lanes and a bicycle/pedestrian lane and demolishing the existing 1927 bridge.

**New Carquinez Bridge Cost Summary (\$Millions)** 

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	Variance
a	b	С	d = b + c	e	f	g = f - d
Capital Outlay Support	124.4	(1.1)	123.3	118.7	123.2	(0.1)
Capital Outlay Construction						-
Replacement Bridge	253.3	4.0	257.3	256.0	257.3	-
South Interchange Reconstruction	73.9	-	73.9	71.9	73.9	-
Existing 1927 Bridge Demolition	35.2	-	35.2	23.6	35.2	-
Other	29.3	(0.7)	28.6	25.2	28.4	(0.2)
Project Reserve	12.1	(2.2)	9.9	-	10.2	0.3
TOTAL	528.2	-	528.2	495.4	528.2	-

Note: Details may not sum to totals due to rounding effects.

**New Carquinez Bridge Schedule Summary** 

Contract	BATA Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
New Carquinez Bridge	December 2003*	-	December 2003*	December 2003*	-
1927 Carquinez Bridge Demolition	September 2007	-	December 2007**	March 2008	3
Landscaping	August 2011	-	August 2011	August 2011	-

<sup>\*</sup> The date shown is for the opening of the bridge to traffic.

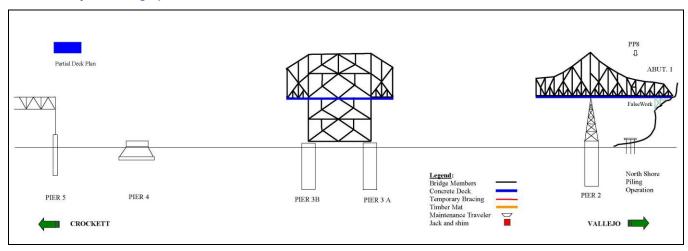
Project Status: The new replacement bridge and all its approaches have been completed and opened to traffic in November 2003. The demolition contract to remove the 1927 bridge, which was awarded in April 2005, is approximately 64% complete based on schedule. However, based on payment, this contract is 78% complete in that the greatest pay items involved the 1958 bridge approach deck replacement, which has been completed in November 2005. To-date, demolition of Units 1, 2, 3 and 7 of the 1927 bridge have been completed. Demolition work continued at Units 4 and 6, with 4 panel points remaining for both Units. Stairs were installed at Unit 9 to access temporary supports at panel points 6. Pile caps at panel point 8 have been completed and preparing to install posts. The demolition of the 1927 bridge approach structure continued with the removal of the steel girders, which was completed within this report period. The removal of the concrete deck portion of the approach structure was completed and reported in last report. Removal of columns has just been started on January 23, 2007.

<sup>\*\*</sup> Based on Current CPM update as of December 2006.

## **Project Issues:**

Issue	Mitigating Action
<ul> <li>Utility conflict with the alignment of bike path.</li> <li>Pier 4 removal.</li> <li>Installation of water line on the 1958 Bridge.</li> <li>Conflicting work with UPRR which delay removal of span 13 and Pier 5.</li> </ul>	Delays can not be ascertained at this point, but the RE estimated completion date would be in March 2008.

## **Project Photographs**



1927 Carquinez Bridge Demolition Progress Status as of January 31, 2007



Carquinez Bridge Progress Photo



Carquinez Bridge Progress Photo



Carquinez Bridge Progress Photo



Carquinez Bridge Progress Photo



Carquinez Bridge Progress Photo



Carquinez Bridge Progress Photo



Carquinez Bridge Progress Photo



Carquinez Bridge Progress Photo

# Regional Measure 1 Program

#### Interstate 880/State Route 92 Interchange Reconstruction Project

**Project Description:** Modify the existing cloverleaf interchange to increase capacity and improve safety and traffic operations.

Interstate 880/State Route 92 Interchange Cost Summary (\$Millions)

Contract a	BATA Budget (07/2005) B	Approved Changes c	Current Approved Budget (02/2007) d = b + c	Cost To Date (02/2007) e	Cost Forecast (02/2007)	Variance g = f - d
I-880/SR-92 Interchange Improvement						9
Capital Outlay Support	28.8	-	28.8	30.9	51.7	22.9
Capital Outlay Construction	94.8	-	94.8	-	122.5	27.7
Capital Outlay Right-of-Way	9.9	-	9.9	8.3	12.4	2.5
Project Reserve	0.3	-	0.3	-	9.7	9.4
TOTAL	133.8	-	133.8	39.2	196.3	62.5

Note: Details may not sum to totals due to rounding effects. \$9.6 million in ACTA funds included under Capital Outlay Construction. \$3.7 million included in Capital Outlay Construction for separate landscape contract.

Interstate 880/State Route 92 Interchange Schedule Summary

Project	BATA Project Completion Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (02/2007)	Contract Complete Schedule Forecast (02/2007)	Schedule Variance (Months)
Project	(07/2005)	(IVIOTILITS)	(02/2007)	(02/2007)	(IVIOTILITS)
I-880/SR-92 Interchange Reconstruction	December 2010	-	December 2010	June 2011	7

**Project Status:** Caltrans risk advertised the contract on January 8, 2007. Right-of-way acquisition is still in progress. Outstanding parcels include the Union Pacific Railroad parcel, a gas station parcel at Route 92 and Santa Clara St., and the parcels affected by the utility underground along Lindenwood Way. An executed C&M agreement with the railroad is still pending. The Project received right-of-way clearance on March 30, 2007. Bid opening scheduled for May 5, 2007, at which time BATA will take budget update actions as needed. Begin construction target date is June 2007. Construction duration is expected to be four (4) years.

#### **Project Issues:**

Issue	Mitigating Action
The forecast schedule included an aggressive schedule for right-of- way acquisition that provided for 18 months to clear numerous parcels in the project area. Additional time will be required to negotiate with parcel owners and the railroad complete property acquisition.	Delays in right-of-way acquisitions are impacting the advertisement and construction of the project. BATA and Caltrans are reviewing methods to accelerate the right-of-way procurement and begin the project. Also, the construction contract will be advertised with an A+B specification, which could reduce the construction duration and partially recover the project schedule.
Bids received on the I-238 Widening contract indicates that the construction estimate may be higher than currently forecasted, from \$196.3 million to \$216.8 million.	Caltrans and BATA will perform a further in-depth review of the estimated costs of major contract items.

# **Project Photographs:**



Interstate 880/State Route 92 Interchange BEFORE



Interstate 880/State Route 92 Interchange AFTER

# Regional Measure 1 Program

# Other Completed Regional Measure 1 (RM1) Projects

Summary Description: Other completed Regional Measure 1 projects are the following: (a) Widen the San Mateo-Hayward Bridge along its low-trestle section and its eastern approach; (b) Widen the Bayfront Expressway (SR 84) from the Dumbarton Bridge to the U.S. 101/Marsh Road interchange; (c) Construct an eastern approach (Richmond Parkway) between the Richmond-San Rafael Bridge and Interstate 80 near Pinole; (d) Modify the U.S. 101/University Avenue interchange; (e) Richmond-San Rafael Bridge Trestle, Fender and Deck Joint Rehabilitation Project; and (f) Richmond-San Rafael Bridge Deck Overlay Project.

Other Completed RM1 Projects Cost Summary (\$Millions)

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	Variance
a	В	С	d = b + c	е		g = f - d
San Mateo-Hayward Bridge Widening Project	217.8	-	217.8	208.7	211.9	(5.9)
Bayfront Expressway Widening Project	36.1	-	36.1	33.2	36.1	-
Richmond Parkway Project	5.9	-	5.9	3.9	5.9	-
U.S. 101/University Interchange	3.8	-	3.8	3.7	3.8	-
RSR Trestle, Fender, and Joint Rehabilitation	102.1	-	102.1	79.9	97.1	(5.0)
RSR Deck Overlay	25.0	-	25.0	18.9	25.0	-
TOTAL	390.7	-	390.7	348.3	379.8	(10.9)

**Schedule Summary** 

Project	Actual Project Completion Date
Richmond Parkway Project	May 2001
San Mateo-Hayward Bridge Widening Project	February 2003
Bayfront Expressway Widening Project	January 2004
U.S. 101/University Interchange	April 2004
Richmond-San Rafael Bridge Trestle, Fender and Deck Joint Rehabilitation	August 2005
RSR Deck Overlay	December 2006

**Project Status:** Construction has been completed on the above listed contracts.

Project Issues: None.



San Mateo-Hayward Bridge Widening Project completed in 2002

This Page Intentionally Left Blank



# **APPENDICES**

- A Toll Bridge Seismic Retrofit Program: San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail
- B Toll Bridge Seismic Retrofit Program Cost Detail
- C Toll Bridge Seismic Retrofit Program Summary Schedule
- D Regional Measure 1 Program Cost Detail
- **E** Regional Measure 1 Program Summary Schedule

<sup>\*</sup> Forecasts for the Monthly Reports are generally updated on a quarterly basis in conjunction with Risk Analysis assessments for the TBSRP Projects and the TBSRP Quarterly Reports.

# Appendix A: Toll Bridge Seismic Retrofit Program (\$Millions)

#### San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail ΔR 144 / SR 66

Contract	EA Number	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	At-Completion Variance
а	b	С	d	e = c + d	f	g	h =g - e
San Francisco-Oakland Bay Bridge East Span Replacement Project							
East Span - Skyway	01202X						
Capital Outlay Support		197.0	-	197.0	158.0	197.0	-
Capital Outlay Construction  Total		1,293.0 1,490.0	-	1,293.0 1,490.0	1,119.6 1,277.6	1,293.0 1,490.0	-
East Span - SAS E2/T1 Foundations	0120EX	1,490.0	_	1,490.0	1,277.0	1,430.0	_
Capital Outlay Support	UIZUEA	52.5	_	52.5	19.1	52.5	-
Capital Outlay Construction		313.5	-	313.5	199.3	313.5	-
Total		366.0	-	366.0	218.4	366.0	-
East Span - SAS Superstructure	0120FX						
Capital Outlay Support	0.20.71	214.6	-	214.6	31.5	214.6	-
Capital Outlay Construction		1,753.7	-	1,753.7	256.2	1,767.4	13.7
Total		1,968.3	-	1,968.3	287.7	1,982.0	13.7
SAS W2 Foundations	0120CX						
Capital Outlay Support		10.0	-	10.0	9.2	10.0	-
Capital Outlay Construction		26.4	-	26.4	25.8	26.4	-
Total		36.4	-	36.4	35.0	36.4	-
YBI South/South Detour	0120RX						
Capital Outlay Support		29.5	-	29.5	19.7	29.5	-
Capital Outlay Construction		131.9	-	131.9	44.1	334.4	202.5
Total		161.4	-	161.4	63.8	363.9	202.5
YBI Transition Structures	0120PX						
Capital Outlay Support		78.7	-	78.7	12.8	78.7	- (00.0)
Capital Outlay Construction		299.3	-	299.3	-	276.1	(23.2)
Total		378.0	-	378.0	12.8	354.8	(23.2)
Oakland Touchdown (see notes below)	01204X						
Capital Outlay Support	012047	74.4	_	74.4	23.6	92.1	17.7
Capital Outlay Construction		283.8	-	283.8	-	302.5	18.7
Total		358.2	-	358.2	23.6	394.6	36.4
* OTD Submarine Cable	0120K4						
Capital Outlay Support					0.4	3.0	
Capital Outlay Construction					-	9.6	
Total					0.4	12.6	
* OTD No. 1 (Westbound)	0120L4						
Capital Outlay Support					3.0	49.9	
Capital Outlay Construction					-	226.5	
Total					3.0	276.4	
* OTD No. 2 (Eastbound)	0120M4				0.0	2. 0	
Capital Outlay Support	0.20				0.2	15.8	
Capital Outlay Construction					0.2	62.0	
Total					0.2	77.8	
* OTD Electrical Systems	0120N4				0.2	11.0	
Capital Outlay Support	0120144				0.1	1.4	
Capital Outlay Support  Capital Outlay Construction					0.1	1.4 4.4	
•					- 0.4		
Total					0.1	5.8	

Oakland Touchdown Cost-to-Date and Cost Forecast includes prior-to-split Capital Outlay Support Costs. Notes:

# Appendix A: Toll Bridge Seismic Retrofit Program (\$Millions)

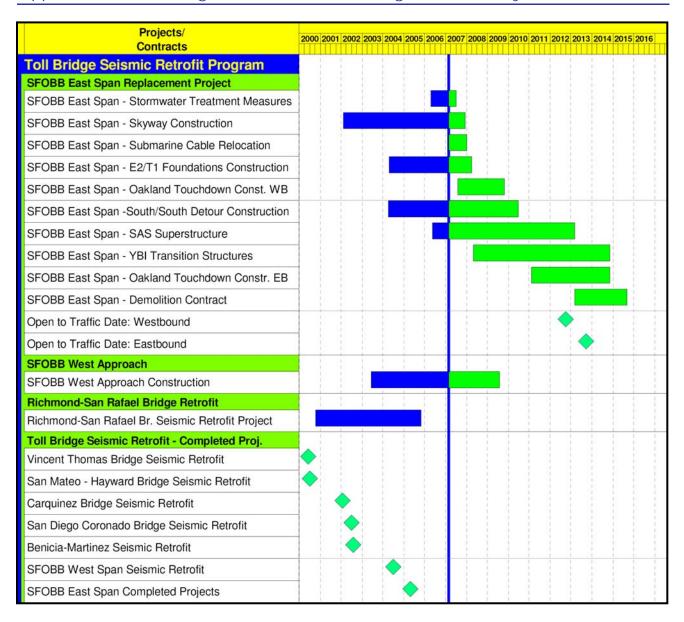
# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail (Cont'd.) AB 144/SR66 Current Cost

Detail (Cont'd.) Contract	EA Number	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	At-Completion Variance
a	b	С	d	e = c + d	f	g	h =g - e
Existing Bridge Demolition Capital Outlay Support Capital Outlay Construction Total	01209X	79.7 239.2 318.9	- - -	79.7 239.2 318.9	0.3 - 0.3	79.7 222.0 301.7	- (17.2) (17.2)
YBI/SAS Archeology Capital Outlay Support Capital Outlay Construction Total	01207X	1.1 1.1 2.2	- - -	1.1 1.1 2.2	1.1 1.1 2.2	1.1 1.1 2.2	- - -
YBI - USCG Road Relocation Capital Outlay Support Capital Outlay Construction Total	0120QX	3.0 3.0 6.0	- - -	3.0 3.0 6.0	2.7 2.8 5.5	3.0 3.0 6.0	- - -
YBI - Substation and Viaduct Capital Outlay Support Capital Outlay Construction Total	0120GX	6.5 11.6 18.1	- - -	6.5 11.6 18.1	6.4 11.3 17.7	6.5 11.6 18.1	- -
Oakland Geofill Capital Outlay Support Capital Outlay Construction Total	01205X	2.5 8.2 10.7	- - -	2.5 8.2 10.7	2.5 8.2 10.7	2.5 8.2 10.7	- - -
Pile Installation Demonstration Project Capital Outlay Support Capital Outlay Construction Total	01208X	1.8 9.2 11.0	-	1.8 9.2 11.0	1.8 9.2 11.0	1.8 9.2 11.0	- - -
Stormwater Treatment Measures Capital Outlay Support Capital Outlay Construction Total	0120JX	6.0 15.0 21.0		6.0 15.0 21.0	6.2 8.2 14.4	7.0 15.0 22.0	1.0 - 1.0
Right-of-Way and Environmental Mitigation Capital Outlay Support Capital Outlay & Right-of-Way	0120X9	- 72.4	-	- 72.4	38.8	- 72.4	- -
Total	04343X & (	72.4 <b>04300X</b>	-	72.4	38.8	72.4	-
Sunk Cost - Existing East Span Retrofit Capital Outlay Support Capital Outlay Construction Total		39.5 30.8 70.3	- - -	39.5 30.8 70.3	39.5 30.8 70.3	39.5 30.8 70.3	- - -
Other Capital Outlay Support Environmental Phase Pre-Split Project Expenditures Non-project Specific Costs Total		97.7 44.9 20.0 162.6	- - - -	97.7 44.9 20.0 162.6	97.7 44.9 3.2 145.8	97.7 44.9 19.0 161.6	(1.0) (1.0)
Subtotal Capital Outlay Support		959.4	-	959.4	480.2	977.1	17.7
Subtotal Capital Outlay Construction Other Budgeted Capital		4,492.1 35.1	-	4,492.1 35.1	1,755.4 0.6	4,686.6 11.0	194.5 (24.1)
Total SFOBB East Span Replacement Project		5,486.6	-	5,486.6	2,236.2	5,674.7	188.1

# Appendix B: Toll Bridge Seismic Retrofit Program Cost Detail (\$Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	At-Completion Variance
a	С	d	e = c + d	f	g	h = g - e
SEODD Fact Span Danlagement Draiget						
SFOBB East Span Replacement Project	959.4		959.4	480.2	977.1	17.7
Capital Outlay Support	4,492.1	-	4,492.1		4,686.6	194.5
Capital Outlay Construction		-	,	1,755.4	,	
Other Budgeted Capital	35.1	-	35.1	0.6	11.0	(24.1)
Total	5,486.6	-	5,486.6	2,236.2	5,674.7	188.1
SFOBB West Approach Replacement	100.0		120.0	00.0	100.0	
Capital Outlay Support	120.0	-	120.0	89.3	120.0	-
Capital Outlay Construction	309.0	-	309.0	229.4	309.0	-
Total	429.0	-	429.0	318.7	429.0	-
SFOBB West Span Retrofit						-
Capital Outlay Support	75.0	-	75.0	74.8	75.0	-
Capital Outlay Construction	232.9	-	232.9	226.3	232.9	-
Total	307.9	-	307.9	301.1	307.9	-
Richmond-San Rafael Bridge Retrofit						
Capital Outlay Support	134.0	(7.0)	127.0	125.9	127.0	-
Capital Outlay Construction	780.0	(82.0)	698.0	665.6	698.0	-
Total	914.0	(89.0)	825.0	791.5	825.0	-
Benicia-Martinez Bridge Retrofit						-
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
Total	177.8	-	177.8	177.8	177.8	-
Carquinez Bridge Retrofit						
Capital Outlay Support	28.7	-	28.7	28.8	28.7	-
Capital Outlay Construction	85.5	-	85.5	85.4	85.5	-
Total	114.2	-	114.2	114.2	114.2	-
San Mateo-Hayward Bridge Retrofit						-
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	-	135.4	135.3	135.4	-
Total	163.5	-	163.5	163.4	163.5	-
Vincent Thomas Bridge Retrofit (Los Angeles)						
Capital Outlay Support	16.4	_	16.4	16.4	16.4	
Capital Outlay Construction	42.1		42.1	42.0	42.1	
Total	58.5	_	58.5	58.4	58.5	_
San Diego-Coronado Bridge Retrofit	50.5		30.3	30.4	30.3	
Capital Outlay Support	33.5	_	33.5	33.2	33.5	
Capital Outlay Construction	70.0		70.0	69.4	70.0	
Total	103.5	-	103.5	102.6	103.5	-
		(7.0)				-
Subtotal Capital Outlay Support	1,433.2	(7.0)	1,426.2	914.8	1,443.9	17.7
Subtotal Capital Outlay	6,286.7	(82.0)	6,204.7	3,348.5	6,399.2	194.5
Subtotal Other Budgeted Capital	35.1	-	35.1	0.6	11.0	(24.1)
Miscellaneous Program Costs	30.0	-	30.0	24.7	30.0	-
Subtotal Toll Bridge Seismic Retrofit Program	7,785.0	(89.0)	7,696.0	4,288.6	7,884.1	188.1
Program Contingency	900.0	89.0	989.0	-	800.9	(188.1)
Total Toll Bridge Seismic Retrofit Program	8,685.0	-	8,685.0	4,288.6	8,685.0	-

# Appendix C: Toll Bridge Seismic Retrofit Program Summary Schedule



# Appendix D: Regional Measure 1 Program Cost Detail (\$Millions)

Project	EA Number	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	At-Completion Variance
a	b	c	d	e = c + d	f	g	h =g - e
New Benicia-Martinez Bridge Project New Bridge	00603_	-	•		·	3	9
Capital Outlay Support Capital Outlay Construction	_	84.9	7.7	92.6	84.0	92.6	-
BATA Funding Non-BATA Funding		661.9 10.1	100.9	762.8 10.1	710.1 13.9	762.8 10.1	-
Subtotal		672.0	100.9	772.9	724.0	772.9	-
Total		756.9	108.6	865.5	808.0	865.5	-
I-680/I-780 Interchange Reconstruction Capital Outlay Support	00606_						
BATA Funding Non-BATA Funding		24.9 1.4	4.0 5.1	28.9 6.5	28.3 5.5	28.9 6.5	-
Subtotal Capital Outlay Construction		26.3	9.1	35.4	33.8	35.4	-
BATA Funding Non-BATA Funding		54.7 21.6	22.5 -	77.2 21.6	68.3 15.4	77.2 21.6	-
Subtotal <b>Total</b>		76.3 102.6	22.5 31.6	98.8 134.2	83.7 117.5	98.8 134.2	-
I-680/Marina Vista Interchange Reconstruction	00605_						
Capital Outlay Support Capital Outlay Construction Total		18.3 51.5 69.8	1.2 8.1 9.3	19.5 59.6 79.1	19.8 54.7 74.5	19.5 59.6 79.1	- - -
	00004						
New Toll Plaza and Administration Building Capital Outlay Support	00604_	11.9	3.3	15.2	15.1	15.2	-
Capital Outlay Construction  Total		24.3 36.2	2.0 5.3	26.3 41.5	22.8 37.9	26.3 41.5	-
Existing Bridge & Interchange Modifications Capital Outlay Support	0060A_	4.3	5.7	10.0	6.7	10.0	
Capital Outlay Construction Total		17.2 21.5	10.9 16.6	28.1 38.1	6.7	28.1 38.1	- -
Other Contracts	See note below						
Capital Outlay Support Capital Outlay Construction		11.4 20.3	(2.3)	9.1 19.0	6.3 15.2	9.1 19.0	-
Capital Outlay Right-of-Way <b>Total</b>		20.4 52.1	(0.1) (3.7)	20.3 48.4	12.3 33.8	20.3 48.4	-
Subtotal BATA Capital Outlay Support Subtotal BATA Capital Outlay Construction		155.7 829.9	19.7 143.1	175.3 973.0	160.2 871.1	175.3 973.0	-
Subtotal Capital Outlay Right-of-Way		20.4	(0.1)	20.3	12.3	20.3	-
Subtotal Non-BATA Capital Outlay Support Subtotal Non-BATA Capital Outlay Construction Project Reserves		1.4 31.7 20.8	5.1 - 35.3	6.5 31.7 56.2	5.5 29.3 -	6.5 31.7 56.2	- -
Total New Benicia-Martinez Bridge Project		1,059.9	203.1	1,263.0	1,078.4	1,263.0	-

Notes:

Includes EA's 00601\_, 00608\_, 00609\_, 0060A\_, 0060C\_, 0060E\_, 0060F\_, 0060G\_, and 0060H\_ and all Project Right-of-Way

# Appendix D: Regional Measure 1 Program Cost Detail (\$Millions) (Cont'd.)

Project	EA Number	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (02/2007)	Cost To Date (02/2007)	Cost Forecast (02/2007)	At-Completion Variance
a	b	С	d	e = c + d	f	g	h =g - e
Carquinez Bridge Replacement Project							
New Bridge	01301_						
Capital Outlay Support		60.5	(0.3)	60.2	60.1	60.2	-
Capital Outlay Construction		253.3	4.0	257.3	256.0	257.3	-
Total		313.8	3.7	317.5	316.1	317.5	-
Crockett Interchange Reconstruction	01305_						
Capital Outlay Support		32.0	(0.1)	31.9	31.9	31.9	-
Capital Outlay Construction		73.9	-	73.9	71.9	73.9	-
Total		105.9	(0.1)	105.8	103.8	105.8	-
Existing 1927 Bridge Demolition	01309_						
Capital Outlay Support	_	16.1	-	16.1	11.6	16.0	(0.1)
Capital Outlay Construction		35.2	-	35.2	23.6	35.2	-
Total		51.3	-	51.3	35.2	51.2	(0.1)
Other Contracts	See note below						
Capital Outlay Support		15.8	(0.7)	15.1	15.1	15.1	-
Capital Outlay Construction		18.8	(0.7)	18.1	15.3	17.9	(0.2)
Capital Outlay Right-of-Way		10.5	` - '	10.5	9.9	10.5	`- '
Total		45.1	(1.4)	43.7	40.3	43.5	(0.2)
Subtotal BATA Capital Outlay Support		124.4	(1.1)	123.3	118.7	123.2	(0.1)
Subtotal BATA Capital Outlay Construction		381.2	3.3	384.5	366.8	384.3	(0.2)
Subtotal Capital Outlay Right-of-Way		10.5	-	10.5	9.9	10.5	(3.2)
Project Reserves		12.1	(2.2)	9.9	-	10.2	0.3
Total Carquinez Bridge Replacement	Project	528.2	-	528.2	495.4	528.2	_

Notes:

Other Contracts includes EA's 01302\_, 01303\_, 01304\_, 01306\_, 01307\_, 01308\_, 0130A\_, 0130C\_, 0130D\_, 0130F\_, 0130G\_, 0130H\_, 0130J\_, 00453\_, 00493\_, 04700\_, 00607\_, 2A270\_, and 29920\_ and all Project Right-of-Way

# Appendix D: Regional Measure 1 Program Cost Detail (\$Millions) (Cont'd.)

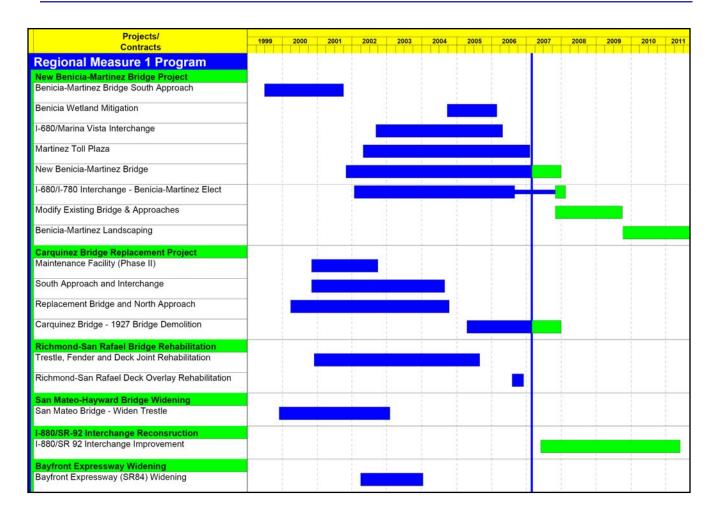
	Current							
Project	EA Nomber	BATA Budget	Approved	Approved Budget	Cost To Date (02/2007)	Cost Forecast	At-Completion Variance	
Project a	EA Number b	(07/2005) C	Changes d	(02/2007) e = c + d	(02/2007) <b>f</b>	(02/2007)		
a	Б	C	u	e = c + a	r	g	h =g - e	
Richmond-San Rafael Bridge Trestle, Fender, and								
Deck Joint Rehabilitation	See note 1 bel	ow						
Capital Outlay Support								
BATA Funding		2.2	-	2.2	1.4	2.2	_	
Non-BATA Funding		8.6	-	8.6	10.4	10.4	1.8	
Subtotal		10.8	-	10.8	11.8	12.6	1.8	
Capital Outlay Construction								
BATA Funding		40.2	-	40.2	33.4	33.4	(6.8)	
Non-BATA Funding		51.1	-	51.1	34.7	51.1	-	
Subtotal		91.3	-	91.3	68.1	84.5	(6.8)	
Project Reserves		-	-				-	
Total		102.1	-	102.1	79.9	97.1	(5.0)	
Richmond-San Rafael Bridge Deck Overlay								
Rehabilitation	0415U_							
Capital Outlay Support								
BATA Funding		4.0	0.5	4.5	3.3	4.5	-	
Non-BATA Funding		4.0	(4.0)	-	-	-	-	
Subtotal		8.0	(3.5)	4.5	3.3	4.5	-	
Capital Outlay Construction		16.9	3.6	20.5	15.6	20.5	-	
Project Reserves		0.1	(0.1)		-	-	-	
Total		25.0	-	25.0	18.9	25.0	-	
Richmond Parkway Project (RM 1 Share Only)	Non-Caltrans							
Capital Outlay Support		-	-	-	-	-	-	
Capital Outlay Construction		5.9	-	5.9	3.9	5.9	-	
Total		5.9	-	5.9	3.9	5.9	-	
San Mateo-Hayward Bridge Widening								
our mates rayward bridge tridering	See note 2 bel	ow						
Capital Outlay Support	00011010 201	34.6	(0.2)	34.4	34.1	34.4	_	
Capital Outlay Construction		180.2	(1.1)	179.1	174.1	176.2	(2.9)	
Capital Outlay Right-of-Way		1.5	-	1.5	0.5	0.6	(0.9)	
Project Reserves		1.5	1.3	2.8	-	0.7	(2.1)	
, Total		217.8	-	217.8	208.7	211.9	(5.9)	
							` ,	
I-880/SR-92 Interchange Reconstruction	EA's 23317_, (	_	_					
Capital Outlay Support		28.8	-	28.8	30.9	51.7	22.9	
Capital Outlay Construction								
BATA Funding		85.2	-	85.2	-	112.9	27.7	
Non-BATA Funding		9.6	-	9.6	-	9.6	-	
Subtotal		94.8 9.9	-	94.8 9.9	8.3	122.5 12.4	27.7	
Capital Outlay Right-of-Way Project Reserves		0.3	-	0.3	0.3	9.7	2.5 9.4	
Total		133.8	-	133.8	39.2	196.3	9.4 62.5	
				133.0	39.2	190.3	02.5	
Bayfront Expressway Widening	EA's 00487_, (	01511_, and 01						
Capital Outlay Support		8.6	(0.3)	8.3	8.1	8.3	-	
Capital Outlay Construction		26.5	-	26.5	24.9	26.5	-	
Capital Outlay Right-of-Way		0.2	-	0.2	0.2	0.2	-	
Project Reserves		0.8	0.3	1.1	-	1.1	-	
Total		36.1	-	36.1	33.2	36.1	-	
US 101/University Avenue Interchange Modification	Non-Caltrans							
Capital Outlay Support		-	-	-	-	-	-	
Capital Outlay Construction		3.8	-	3.8	3.7	3.8	-	
Total		3.8	-	3.8	3.7	3.8	-	
Outstand DATA Constitution of the Constitution				0=0.5				
Subtotal BATA Capital Outlay Support		358.3	18.6	376.8	356.7	399.6	22.8	
Subtotal BATA Capital Outlay Construction		1,569.8	148.9	1,718.7	1,493.5	1,736.5	17.8	
Subtotal Capital Outlay Right-of-Way Subtotal Non-BATA Capital Outlay Support		42.5 14.0	(0.1)	42.4 15.1	31.2 15.9	44.0 16.9	1.6 1.8	
Subtotal Non-BATA Capital Outlay Support Subtotal Non-BATA Capital Outlay Construction		14.0 92.4	1.1	15.1 92.4	15.9 64.0	16.9 92.4	1.8	
Project Reserves		35.6	34.6	70.3	-	77.9	7.6	
Total RM1 Program		2,112.6	203.1	2,315.7	1,961.3	2,367.3	51.6	
/ Own time i rogium		2,112.0	200.1	2,010.7	1,501.5	2,507.5	01.0	

Notes:

<sup>&</sup>lt;sup>1</sup> Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRA Expenses for EA 0438U\_ and 04157\_

<sup>&</sup>lt;sup>2</sup> San Mateo-Hayward Bridge Widening Includes EA's 00305\_, 04501\_, 04502\_, 04503\_, 04504\_, 04505\_, 04506\_, 04507\_, 04508\_, 04509\_, 27740\_, 27790\_, 04860\_

# Appendix E: Regional Measure 1 Program Summary Schedule



# Appendix F: Glossary of Terms

**AB144/SB 66 BUDGET:** The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005 and September 29, 2005, respectively.

BATA BUDGET: The planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

**APPROVED CHANGES:** For cost, changes to the AB144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

**CURRENT APPROVED BUDGET:** The sum of the AB144/SB66 Budget or BATA Budget and Approved Changes.

COST TO DATE: The actual expenditures incurred by the program, project or contract as of the month and year shown.

**COST FORECAST:** The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

AT COMPLETION VARIANCE or VARIANCE (cost): The mathematical difference between the Cost Forecast and the Current Approved Budget.

AB 144/SB 66 PROJECT COMPLETE BASELINE: The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

BATA PROJECT COMPLETE BASELINE: The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

PROJECT COMPLETE CURRENT APPROVED SCHEDULE: The sum of the AB144/SB66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

**PROJECT COMPLETE SCHEDULE FORECAST:** The current projected date for the completion of the program, project, or contract.

SCHEDULE VARIANCE or VARIANCE (schedule): The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

The following information is provided in accordance with California Government code Section 7550:

This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) for the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production, is \$1,574,873.

This Page Intentionally Left Blank